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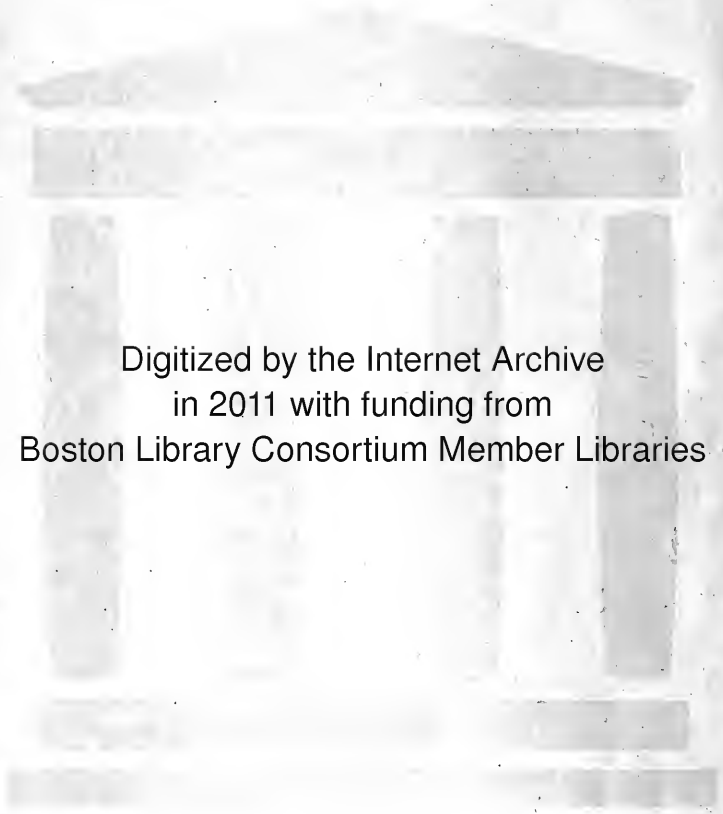
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Northeastern University

DAY DIVISION

COLLEGES OF

LIBERAL ARTS

BUSINESS ADMINISTRATION

ENGINEERING

1938-1939



BOSTON, MASSACHUSETTS

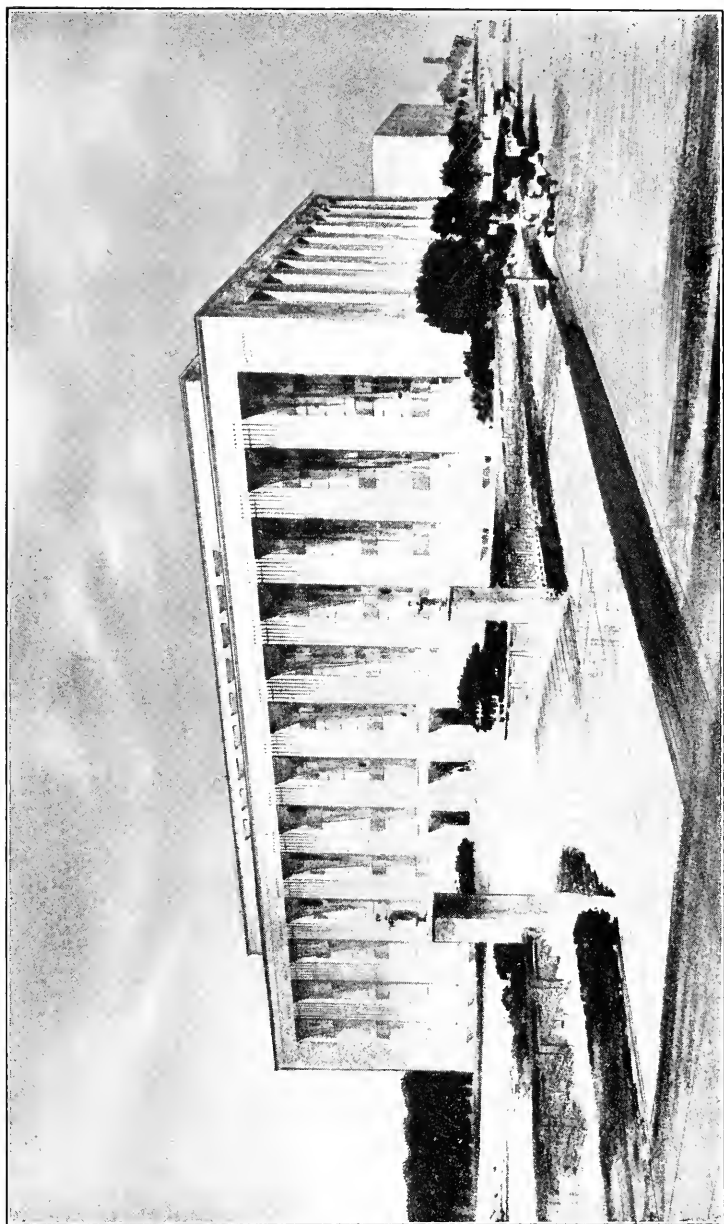
January, 1938

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Northeastern University will welcome gifts and bequests for the following purposes:

- (a) For its Building Program
- (b) For general endowment
- (c) For specific purposes which may especially appeal to the donor.

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WEST BUILDING — NORTHEASTERN UNIVERSITY

NORTHEASTERN UNIVERSITY

DAY DIVISION

COLLEGE OF LIBERAL ARTS

COLLEGE OF BUSINESS ADMINISTRATION

COLLEGE OF ENGINEERING

Conducted on the Co-operative Plan

TABLE OF CONTENTS

	<i>Pages</i>
I. NORTHEASTERN UNIVERSITY	
1. Calendar for the College Year 1938-1939.....	4-5
2. Trustees, Faculty, and Staff.....	6-14
3. Purpose of Northeastern University.....	17-20
4. Co-operative Plan of Education.....	21-26
5. General Information About the Day Division	27-33
6. Buildings and Equipment.....	34-56
7. Student Activities.....	57-65
8. Admission Requirements and Freshman Pro- grams.....	66-71
II. COLLEGE OF LIBERAL ARTS.....	73-124
III. COLLEGE OF BUSINESS ADMINISTRATION	125-150
IV. COLLEGE OF ENGINEERING.....	151-213
V. COURSES OF INSTRUCTION.....	215-225
VI. DIRECTORY OF STUDENTS.....	226-260
VII. INDEX.....	261-264

Freshman Calendar, 1938-1939

SEPTEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
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OCTOBER

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NOVEMBER

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DECEMBER

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JANUARY

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29	30	31				

FEBRUARY

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26	27	28				

MARCH

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19	20	21	22	23	24	25
26	27	28	29	30	31	

APRIL

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30						

MAY

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JUNE

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JULY

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23	24	25	26	27	28	29
30	31					

AUGUST

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13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Days on which college exercises are held are indicated thus: **1, 2, 3.**

Sundays, holidays, and vacations are indicated thus: 1, 2, 3.

Upperclass Calendar, 1938-1939

SEPTEMBER

S	M	T	W	T	F	S
				①	②	③
④	⑤	⑥	⑦	⑧	⑨	⑩
⑪	12	13	14	15	16	17
⑮	19	20	21	22	23	24
⑳	26	27	28	29	30	

OCTOBER

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⑮	17	18	19	20	21	22
⑳	24	25	26	27	28	29
⑳	31					

NOVEMBER

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⑥	7	8	9	10	11	12
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⑳	21	22	23	⑭	25	26
⑳	28	29	30			

DECEMBER

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					2	3
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⑪	12	13	14	15	16	17
⑮	19	20	21	22	23	24
⑳	26	27	28	29	30	31

JANUARY

S	M	T	W	T	F	S
①	②	3	4	5	6	7
⑧	9	10	11	12	13	14
⑮	16	17	18	19	20	21
⑳	23	24	25	26	27	28
⑳	30	31				

FEBRUARY

S	M	T	W	T	F	S
			1	2	3	4
⑤	6	7	8	9	10	11
⑫	13	14	15	16	17	18
⑮	20	21	⑳	23	24	25
⑳	27	28				

MARCH

S	M	T	W	T	F	S
			1	2	3	4
⑤	6	7	8	9	10	11
⑫	13	14	15	16	17	18
⑮	20	21	22	23	24	25
⑳	27	28	29	30	31	

APRIL

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⑮	17	18	19	20	21	22
⑳	24	25	26	27	28	29
⑳						

MAY

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						6
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⑮	15	16	17	18	19	20
⑳	22	23	24	25	26	27
⑳	29	⑳	31			

JUNE

S	M	T	W	T	F	S
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					2	3
④	5	6	7	8	9	10
⑪	12	13	14	15	16	17
⑮	⑮	⑳	㉑	㉒	㉓	㉔
⑳	㉕	㉖	㉗	㉘	㉙	㉚

JULY

S	M	T	W	T	F	S
						①
②	③	④	⑤	⑥	⑦	⑧
⑨	⑩	⑪	⑫	⑬	⑭	⑮
⑮	⑮	⑮	⑮	⑮	⑮	⑮
⑮	㉑	㉒	㉓	㉔	㉕	㉖
⑮	㉗	㉘	㉙	㉚	㉛	㉜

AUGUST

S	M	T	W	T	F	S
		①	②	③	④	⑤
⑥	⑦	⑧	⑨	⑩	⑪	⑫
⑮	⑮	⑮	⑮	⑮	⑮	⑮
⑮	㉑	㉒	㉓	㉔	㉕	㉖
⑮	㉗	㉘	㉙	㉚	㉛	㉜

Days on which Division A students are in college are indicated thus: 1, 2, 3.

Days on which Division B students are in college are indicated thus: **1, 2, 3.**

Sundays, holidays and summer periods are indicated thus: ①, ②, ③.

See page 5 for statement of summer review periods and upperclass vacations.

Calendar for the College Year, 1938-1939

1938

- AUGUST 31 *Wednesday*. Entrance condition examinations.
- SEPTEMBER 5 *Monday*. Labor Day. (College exercises omitted.)
- SEPTEMBER 8 *Thursday*. Registration and opening of college for freshmen. Students failing to register promptly on September 8 will be charged a late registration fee of five dollars (\$5).
- SEPTEMBER 12 *Monday*. Opening of college for Division A upperclassmen.
- OCTOBER 12 *Wednesday*. Columbus Day. (College exercises omitted.)
- NOVEMBER 21 *Monday*. Opening of college for Division B upperclassmen.
- NOVEMBER 23 *Wednesday*. College exercises omitted after 1:00 p.m.
- NOVEMBER 24 *Thursday*. Thanksgiving Day. (College exercises omitted.)
- DECEMBER 26 *Monday*. Celebration of Christmas. (College exercises omitted.)
- DECEMBER 25 }
JANUARY 8 } Vacation for freshmen.



1939

- JANUARY 2 *Monday*. Celebration of New Year's Day. (College exercises omitted.)
- JANUARY 30 *Monday*. Second semester begins for freshmen and Division A upperclassmen.
- FEBRUARY 22 *Wednesday*. Washington's Birthday. (College exercises omitted.)
- APRIL 8 *Saturday*. College year ends for Division A upperclassmen.

-
- APRIL 10 *Monday.* Second semester begins for Division B upperclassmen.
- MAY 27 *Saturday.* College year ends for freshmen.
- MAY 30 *Tuesday.* Memorial Day. (College exercises omitted.)
- JUNE 17 *Saturday.* College year ends for Division B upperclassmen.
- JUNE 18 *Sunday.* Baccalaureate Sermon.
- JUNE 19 *Monday.* Commencement.
Review courses or vacation begins for Division A upperclassmen.
Summer period of co-operative work begins for Division B upperclassmen.
- JULY 4 *Tuesday.* Independence Day. (College exercises omitted.)
- JULY 15 *Saturday.* Review courses end for Division A upperclassmen.
- JULY 31 *Monday.* Vacation begins for Division B upperclassmen.
Summer period of co-operative work begins for Division A upperclassmen.
- AUGUST 14 *Monday.* Review courses begin for freshmen and Division B upperclassmen.
- SEPTEMBER 4 *Monday.* Labor Day. (College exercises omitted.)
- SEPTEMBER 7 *Thursday.* Registration and opening of college for freshmen. Students failing to register promptly on September 7 will be charged a late registration fee of five dollars (\$5).
- SEPTEMBER 9 *Saturday.* Review courses end for Division B upperclassmen and for freshmen.
- SEPTEMBER 11 *Monday.* Opening of college year 1939-1940.

The Northeastern University Corporation

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ALBERT EDWARD WHITTAKER, S.B., Ed.M.

Assistant Professor of Mathematics

Office 30 Huntington Building

Res. 185 No. Common St., Lynn

Instructors

SIDNEY RALPH BLOOMFIELD, S.B.

Assistant Instructor in Business Administration

Office 352 Main Building

Res. 19 Coral Ave., Winthrop

WILLIAM THOMAS CLONEY, JR., A.B.

Instructor in English

Office 12 Huntington Building

Res. 25 Harley St., Dorchester

OTIS FRENCH CUSHMAN, S.B., M.S.

Instructor in Drawing

Office 9 Huntington Building

Res. 316 Huntington Ave., Boston

DAVID LYMAN DAVIDSON, S.B., M.S., Ph.D.

Instructor in Chemistry

Office 463 Main Building

Res. 316 Huntington Ave., Boston

JOHN JAMES DEVINE, S.B., Sc.M.

Instructor in Civil Engineering

Office 31 Huntington Building

Res. 76 St. Stephen St., Boston

JAMES WILLIAM DUNN, A.B.

Instructor in Physical Education and Head Coach of Football and Basketball

Office 2 Huntington Building

Res. 12 Mason Rd., Watertown

GEORGE RAYMOND FENNEL, S.B., M.B.A.

Instructor in Business Management

Office 451 Main Building

Res. 42 Fremont Ave., Everett

HERBERT WENDELL GALLAGHER, S.B.

Coach of Hockey and Baseball

Office 2 Huntington Building

Res. 167 Hunnewell Ave., Newton

MARIO GIELLA, S.B.

Assistant Instructor in Chemical Engineering

Office 463 Main Building

Res. 52 Hull St., Boston

LAURENCE B. HEILPRIN, S.B., M.A.

Instructor in Mathematics

Office 31 Huntington Building

Res. 14 Sacramento St., Cambridge

WILLIAM CARL HULTGREN

Instructor in Physical Education

Gymnasium Office

Res. 80 Woodside Rd., Winchester

HAROLD WALTER KOPP

Assistant Coach of Football

Office 2 Huntington Building

Res. 316 Huntington Ave., Boston

ROBERT EVERETT LAVEAGA, B.P.Ed., Ed.M.

Instructor in Physical Education

Gymnasium Office

Res. 91 Cross St., Belmont

LESLIE WELLMAN LENFEST, S.B. Office 101 Laboratory Building	Assistant Instructor in Civil Engineering Res. 98 Langdon Ave., Watertown
WILLIAM FAY LUDER, A.B., Ph.D. Office 463 Main Building	Instructor in Chemistry Res. 35 Park Drive, Boston
DONALD HERSHEY MACKENZIE, S.B., Ed.M. Office 2 Huntington Building	Instructor in Physical Education Res. 178 Harriet Ave., Quincy
RAYMOND ENGLISH MILLARD Gymnasium Office	Instructor in Physical Education Res. 23 Otis Place, Newtonville
HERBERT STENGEL MORANG Office 2 Huntington Building	Coach of Cross Country Res. 20 Lafayette St., Waltham
RUDOLPH MAGNUS MORRIS, S.B., Ed.M. Office 452 Main Building	Instructor in Education Res. 134 Maple St., West Roxbury
RALPH DANIEL NELSON, S.B., M.S. Office 30 Huntington Building	Instructor in Mathematics Res. 316 Huntington Ave., Boston
VERNER OLOF NELSON Office 105 Laboratory Building	Instructor in Co-ordination Res. 60 Birchcliff Rd., East Weymouth
FRANKLIN NORVISH, S.B., M.A. Office 363 Main Building	Instructor in English Res. 73 Upland Rd., Brockton
RUDOLF OSCAR OBERG, S.B. Office 350 Main Building	Instructor in Co-ordination Res. 37 Walker St., Atlantic
JAMES ARTHUR PATTERSON, S.B. Office 31 Huntington Building	Instructor in Accounting Res. 6 Home St., Lawrence
GEORGE KENNETH ROGERS, S.B. Office 50 Huntington Building	Instructor in Business Administration Res. 268 Pleasant St., Brockton
CHARLES ARTHUR SEWELL, S.B., M.S. Office 31 Huntington Building	Instructor in Mathematics Res. 316 Huntington Ave., Boston
THEODORE SILVERSTEIN, A.B., M.A., Ph.D. Office 363 Main Building	Instructor in English Res. 11 Everett St., Cambridge
GERALD RUSSELL TATTON, S.B., M.B.A. Office 2 Huntington Building	Instructor in Business Administration Res. 61 Almont St., Medford
CALVIN W. TENNEY, A.B. Office 363 Main Building	Instructor in Modern Languages Res. 25 Burbank St., Boston
ROBERT DOUGLAS THOMSON, S.B. Office 108 Laboratory Building	Lecturer in Industrial Engineering Res. 411 Broadway, Lynn
JOHN WILLS TUTHILL, S.B., M.B.A. Office 50 Huntington Building	Instructor in Banking and Finance Res. 11C Shaler Lane, Cambridge
ALFRED JAMES WISE, S.B. Office 14 Laboratory Building	Instructor in Electrical Engineering Res. Tiverton, Rhode Island
SAVERIO ZUFFANTI, S.B., M.A. Office 463 Main Building	Instructor in Chemical Engineering Res. 116 Quincy Shore Drive, No. Quincy

Faculty Committees

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CARL S. ELL, Chairman

HAROLD W. MELVIN
WINTHROP E. NIGHTINGALE
EDWARD S. PARSONS

JOHN B. PUGSLEY
MILTON J. SCHLAGENHAUF
WILLIAM C. WHITE

2. Executive

HAROLD W. MELVIN, Chairman
EDWARD S. PARSONS

WINTHROP E. NIGHTINGALE
JOHN B. PUGSLEY

3. Administrative

JOHN B. PUGSLEY, Chairman
WILFRED S. LAKE

WINTHROP E. NIGHTINGALE
EDWARD S. PARSONS

JOSEPH SPEAR

4. Co-operative Work

WINTHROP E. NIGHTINGALE, Chairman
JOHN B. PUGSLEY

GEORGE W. TOWLE
WILLIAM C. WHITE

MARGARET LOUISE MARCHANT	45 Lincoln St., Winchester
Admissions Office—451M	
FLORENCE MASKELL	42 Brush Hill Rd., Milton
Co-operative Work Office—350M	
DOROTHY MILNE MURRAY	204 Fair Oak Park, Needham
Secretary to the Director of Student Activities—2H	
ALYCE ANN NICHOLS	507 Chestnut St., Needham
Bookkeeper, Treasurer's Office—200M	
CAROLINE FRANCES PETTINGELL	173 Hancock St., Cambridge
Bookkeeper, School Administration Office—351M	
MARJORIE GRAFFTE PROUT	1179 Boylston St., Boston
Office of the Dean—453M	
MADELYN EDYTHE RALPH	64 Beach Ave., Swampscott
Secretary to the Executive Secretary—452M	
GRETCHEN DOUGLASS RANDALL	48 Milk St., Newburyport
School Administration Office—351M	
JESSIE PAINE RHODES	7 Perkins St., Jamaica Plain
Secretary to the Director of School Administration—351M	
HELEN LOUISE SAMPSON	1364 Walnut St., Newton Hlds.
Secretary to the President—200M	
ALEXANDRA GRAHAM SHAW	1175 Boylston St., Boston
Student Activities Office—2H	
MARY DIXON TURNER	163 Forest St., Melrose
Student Union Office—28H	
GRACE LISCOM WATKINS	76 Glendale St., Dorchester
Assistant Librarian—Library, Main Building	

Office and Laboratory Assistants

PASQUALE ANTONELLI	Assistant in the Business Laboratory
AUSTIN W. BERKELEY, A.B.	Assistant in the Department of English
LORIMER P. BROOKS	Assistant in Electrical Engineering
ROBERT H. BROWN	Assistant in Chemical Engineering
JAMES COLLIGEN	Assistant in the Office of the Dean
JAMES J. CONNOLLY	Assistant in the Student Activities Office
ADAM M. COOK	Assistant in the Physics Laboratory
ROBERT J. GINTHER	Assistant in Chemical Engineering
CHARLES T. GRANT	Assistant in Mechanical Engineering
ROBERT GURNEY	Assistant in the Huntington Branch Library
CHARLES V. HAAS	Assistant in the Huntington Branch Library
ROBERT F. HARRINGTON	Assistant in the Department of Biology
MERRILL D. HART	Assistant in Mechanical Engineering
ALDEN T. HATCH	Assistant in the Huntington Branch Library
ALVIN C. HATFIELD	Assistant in Mechanical Engineering
JAMES J. HAVERTY	Assistant in Electrical Engineering
RAY HENDERSON	Assistant in the Office of the Dean
GARDNER W. HOLMES, JR.	Assistant in the Student Activities Office
DANIEL HORN	Assistant in the Department of Mathematics
WALTER P. HURLEY	Assistant in the Department of Co-operative Work
ARTHUR W. JOHNSTON	Assistant in Chemical Engineering
KAROL J. KRYSYAN	Assistant in Mechanical Engineering
VINCENT P. LABOWICZ, JR.	Assistant in the Student Union
GEORGE C. LECK	Assistant in Mechanical Engineering
WATLER A. LEDWITH	Assistant in Mechanical Drawing
FREDERICK W. LEE	Assistant in the Department of Admissions
WILLIAM H. LITTLE	Assistant in the Student Union
ALBERT S. MAKAS	Assistant in the Physics Laboratory
RALPH C. McDONALD	Assistant in Chemical Engineering
WILLIAM A. McGRATH	Assistant in Chemical Engineering

ALBERT H. McRAE
FRANK H. MEEHAN
JAMES H. NYE
PHILIP M. PERSIA
WILLIAM C. PETRASKE
EDWARD D. QUANN, JR.
HAROLD T. REGAN
LOUIS G. REINIGER
STANLEY L. ROGERS
GUSTAV ROOK
FRANK J. SANSEVERINO
HENRY F. SILSBY
CORNELIUS M. SULLIVAN
REGINALD C. THOMAS
LORING M. THOMPSON
SIDNEY TRACHTENBERG

Assistant in Electrical Engineering
Assistant in the Department of Admissions
Assistant in Electrical Engineering
Assistant in Electrical Engineering
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Assistant in the Student Union
Assistant in Electrical Engineering
Assistant in Chemical Engineering
Assistant in Chemical Engineering
Assistant in the Student Union
Assistant in the Department of Biology
Assistant in Mechanical Drawing
Assistant in the Department of Mathematics

University Lecturers

LEWIS BROWNE

AUTHOR, LECTURER

"What Our Novelists Are Saying"

SMEDLEY D. BUTLER

GENERAL, U. S. MARINE CORPS, RETIRED

"War Is a Racket"

BERNARD C. CLAUSEN

FIRST BAPTIST CHURCH, PITTSBURGH

"Fight Somebody Your Size"

JOHN F. DAVIS

HUMORIST, PHILOSOPHER

"The Dimensions of Life"

J. ANTON DE HAAS

PROFESSOR OF INTERNATIONAL RELATIONSHIPS, HARVARD UNIVERSITY

"The International Outlook"

LLOYD C. DOUGLAS

AUTHOR, LECTURER

"Experiences of an Author"

DIXON RYAN FOX

PRESIDENT, UNION COLLEGE

"American History Explains America"

HUBERT HERRING

INTERPRETER OF NATIONAL AFFAIRS

"The Incredible Swedes"

TEHYI HSIEH

STATESMAN, ECONOMIST, AUTHOR

"Storms Over Asia"

HARRY LEVI

RABBI, TEMPLE ISRAEL

"Ability Means Responsibility"

J. EDGAR PARK

PRESIDENT, WHEATON COLLEGE

"The Secret of Success"

OSWALD RYAN

GENERAL COUNSEL OF THE FEDERAL POWER COMMISSION

"The Challenge to Democracy"

RALPH W. SOCKMAN

MINISTER, CHRIST CHURCH, NEW YORK CITY

"The New Patriotism"

JAMES S. THOMAS

PRESIDENT, CLARKSON COLLEGE OF TECHNOLOGY

"New Frontiers for Smart People"

HOWARD THURMAN

PROFESSOR OF PHILOSOPHY, HOWARD UNIVERSITY

"The Challenge of India"

Chapel Preachers

DR. CHARLES N. ARBUCKLE
MINISTER, FIRST BAPTIST CHURCH, NEWTON

REVEREND RICHARD H. BENNETT
MINISTER, PAYSON PARK CHURCH, BELMONT

DR. EDWIN PRINCE BOOTH
PROFESSOR OF CHURCH HISTORY, BOSTON UNIVERSITY SCHOOL OF THEOLOGY

DR. DWIGHT BRADLEY
MINISTER, UNION CONGREGATIONAL CHURCH, BOSTON

REVEREND ROBERT WOOD COE
MINISTER, LEYDEN CONGREGATIONAL CHURCH, BROOKLINE

RABBI BERYL D. COHON
RABBI, TEMPLE ISRAEL, BOSTON

DR. FRANK E. DUDDY
MINISTER, NORTH CONGREGATIONAL CHURCH, CAMBRIDGE

DR. NEWTON C. FETTER
MINISTER TO BAPTIST STUDENTS IN GREATER BOSTON

DR. C. LESLIE GLENN
MINISTER, CHRIST CHURCH, CAMBRIDGE

REVEREND NORMAN D. GOEHRING
MINISTER TO LUTHERAN STUDENTS IN GREATER BOSTON

REVEREND WILLIAM H. GYSAN
MINISTER TO UNITARIAN STUDENTS IN GREATER BOSTON

PROFESSOR CHARLES W. HAVICE
EXECUTIVE SECRETARY, NORTHEASTERN STUDENT UNION

DR. ARTHUR LEE KINSOLVING
MINISTER, TRINITY CHURCH, BOSTON

REVEREND CARL H. KOPF
MINISTER, MOUNT VERNON CHURCH, BOSTON

DR. ASHLEY D. LEAVITT
MINISTER, HARVARD CONGREGATIONAL CHURCH, BROOKLINE

DR. ELMER A. LESLIE
PROFESSOR OF HEBREW AND OLD TESTAMENT LITERATURE, BOSTON UNIVERSITY

REVEREND FATHER MADDUX
PRIEST, CHURCH OF ST. JOHN THE EVANGELIST, BOSTON

DR. BOYNTON MERRILL
MINISTER, SECOND CHURCH, NEWTON

REVEREND SAMUEL H. MILLER
MINISTER, OLD CAMBRIDGE BAPTIST CHURCH, CAMBRIDGE

DR. PHILLIPS E. OSGOOD
MINISTER, EMMANUEL CHURCH, BOSTON

Northeastern University

Purpose and Program

NORTHEASTERN UNIVERSITY is incorporated as a philanthropic institution under the General Laws of Massachusetts. The University was developed around the simple yet practical purpose of meeting human needs in distinctive and serviceable ways, maintaining flexibility in program and organization in order that constant adjustment could be made to changing needs. The faculties of the University have been selected because of their understanding and appreciation of student problems and needs and their ability to teach and to guide students effectively.

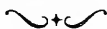
Pursuant to this purpose, the University has evolved a definite plan of education which embraces Co-operative Education by day and Adult Education by night. So far as the New England States are concerned, Northeastern University is the only institution whose day colleges are conducted under the Co-operative Plan. The several schools and programs of the University are operated either under the name "Northeastern University" or by its affiliated schools, the Lincoln Schools, and The Huntington Day School for Boys. The following is a brief outline of the principal types of educational opportunity offered.

1. In the field of Co-operative Education there are three day colleges — the College of Liberal Arts, the College of Engineering, and the College of Business Administration. All of these colleges have five-year curricula. The College of Liberal Arts offers majors in the usual fields of the arts and the sciences leading to the degrees of Bachelor of Arts and Bachelor of Science. The College of Engineering, one of the largest co-operative engineering colleges in the United States, has curricula in Civil, Mechanical, Electrical, Chemical, and Industrial Engineering. The College of Business Administration has curricula in Accounting, Banking and Finance, and Business Management. The College of Engineering and the College of Business Administration confer the degree of Bachelor of Science with specification indicating the field of specialization. The Co-operative Plan under which these day colleges operate enables the student to alternate regular periods of classroom instruction with supervised employment in an industrial or commercial position, thus combining theory and practice in an exceedingly effective manner. Apart from the educational advantages of the Co-operative Plan is the

opportunity for self-support while the student is pursuing his studies at Northeastern University. During the co-operative periods, students not only gain experience but are also paid for their services. Approximately three hundred business and industrial concerns co-operate with Northeastern University in making this program effective.

2. The Adult Education Program of the University has been developed in two professional schools, whose classes meet in the evening. The School of Law offers two programs—an undergraduate program which prepares for admission to the bar and for the practice of the law and leads to the degree of Bachelor of Laws, and a graduate program for those who have graduated from approved law schools, leading to the degree of Master of Laws. A pre-legal program is also available offering the equivalent of two years of college work and preparing for admission to the School of Law. The School of Business has curricula in Business Administration, Accounting, Law and Business, and Engineering and Business. This school awards the Bachelor of Business Administration degree with specification.
3. In order that larger groups of men and women might be served through its evening schools, Northeastern University operates divisions of the School of Law and the School of Business in co-operation with the Young Men's Christian Association in Worcester and Springfield and of the School of Business in co-operation with the Providence Young Men's Christian Association. With the establishment of the divisions, thorough-going methods of supervision were instituted and have been consistently followed and improved, with the result that the divisional work is conducted upon a highly efficient basis.
4. The Adult Education Program has also been developed through the Lincoln Schools, which are affiliated with and conducted by Northeastern University. The classes in these schools are held at convenient evening hours. The Lincoln Technical Institute offers curricula upon a junior college level in various phases of engineering; whereas the Lincoln Preparatory School, accredited by the New England College Entrance Certificate Board, prepares students for admission to college and offers other standard high school programs.
5. The Huntington Day School for Boys, also affiliated with and conducted by Northeastern University, is the outgrowth of a demand in the city of Boston for an urban preparatory

school with high educational standards, which would furnish thorough preparation for admission to the leading colleges and universities. While easily accessible to the various sections of Boston and to the suburbs, it has the facilities of a country day school and offers a country day school program. This School is one of the leading preparatory schools of the country.



Organization

Northeastern University is incorporated as a philanthropic institution under the General Laws of Massachusetts. Furthermore, the State Legislature, by special enactment, has given the University general degree granting powers.

The Corporation of Northeastern University consists of men who occupy responsible positions in business and the professions. This Corporation elects from its membership a Board of Trustees in whom the control of the institution is vested. The Board of Trustees has four standing committees: (a) an Executive Committee which serves as an Ad Interim committee between the regular meetings of the Board of Trustees and has general supervision of the financial and educational policies of the University; (b) a Committee on Housing which has general supervision over the buildings and equipment of the University; (c) a Committee on Funds and Investments which has the responsibility of administering the funds of the University; (d) a Development Committee which is concerned with furthering the development plans of the University.

The Board of Trustees has also created, through its by-laws an Executive Council, consisting of the President, the Secretary, and the two Vice-Presidents. To the Executive Council the Board has allocated broad powers.

Northeastern University and Affiliated Schools

Statistical Summary

1936-1937

	<i>Administrative Officers and Faculty</i>	<i>Students</i>
I. General Administration	8	
II. Northeastern University		
College of Liberal Arts	}	1757
College of Engineering		
College of Business Administration		
School of Law	52*	1554*
School of Business	91*	1277*
III. Schools affiliated with and conducted by Northeastern University		
Lincoln Schools	49	965
Huntington Day School for Boys		
Regular Term	17	188
Summer Term	9	111
	<hr/>	<hr/>
Total	297	5852
Less Duplicates	35	381
	<hr/>	<hr/>
Net Total	262	5471

*These figures include the administrative officers, faculties and students of the Divisions of the University in Worcester, Springfield and Providence.

The Co-operative Plan

How It Works

IN detail, the co-operative plan works in this manner. Upperclassmen are divided into two nearly equal groups, one of which is called Division A and the other Division B; and each man is assigned a job with some business or industrial concern. So far as possible, each man in one Division is paired with a man in the other Division, so that the two, by taking turns, may occupy one job throughout the entire year. At the beginning of the year, the Division A student returns to the University for ten weeks of classroom work; and at the end of that time he goes out to work ten weeks with a co-operating firm. His place at the University is then taken by his *alternate*, the corresponding Division B student. When ten weeks more have passed, the Division A man returns to college, and the Division B man returns to the co-operative job. The alternation of work and classroom study continues throughout the year, except that one working period in the summer for each division is six weeks in length instead of ten. An upperclassman thus has twenty weeks at college, twenty-six weeks at co-operative work, and six weeks vacation each year.

Student Analysis and Counselling

Students are assigned to a co-ordinator, who interviews them periodically during their freshman year for the purpose of determining their background, abilities, temperaments, and aptitudes. During these interviews the co-ordinator discusses various fields of activity and answers such questions as the students may have in regard to the many phases of business and industry. Each student is studied in the light of his physical condition, scholastic ability, and other factors affecting his probable success in vocational life. These interviews culminate in a mutual agreement between the student and his co-ordinator regarding the field of co-operative work in which the student is to be placed. During his upperclass years the student continues to have frequent conferences with his co-ordinator regarding vocational adjustments and personal problems. In this way the progress of every student is observed and co-ordinated with his college work to the end that he may obtain maximum values from his training at Northeastern.

Placement

The co-ordinator visits co-operative firms and arranges with them for the employment of the students under his charge. The range of opportunities available to Northeastern students is wide, including practically all phases of industrial life. As a general rule, sophomores are placed upon routine and laborious jobs through which they may prove their fitness for more responsible work. The jobs upon which Northeastern students are employed are in no sense protected opportunities. They are regular jobs under actual business conditions and are held in competition with other sources of supply. The only special privilege accorded Northeastern students is that of attending college on the co-operative plan. The University expects every student to stand on his own feet while he is on co-operative work, and advancement to the more responsible jobs is based entirely upon merit.

Supervision and Guidance

While the University does not adopt a paternal attitude toward co-operative work, it nevertheless assumes certain responsibilities toward students and co-operating firms. Co-ordinators visit each job in order that the employer may report upon the student's achievement and that necessary adjustments may be made. Co-ordinators supervise the assignment of students to various jobs and in conjunction with employers arrange for promotions and training schedules. Problems that arise on co-operative work are adjusted by mutual agreement of co-ordinator, student, and employer. In the event of special difficulties or dissatisfaction, the case may be adjusted by the Committee on Co-operative work, which comprises several members of the faculty.

Through a series of co-operative work reports prepared during their working periods, students are led to analyze their jobs and to develop a thoughtful and investigative attitude toward their working environment. A most important phase of co-operative work is the opportunity afforded for guidance by the frank discussion of actual problems encountered on the job. The intimate contact between co-ordinator and student is of great worth in helping the student to get the most value from each co-operative work assignment. While the University endeavors to provide every possible opportunity for its students, it expects them at the same time to take the initiative and to assume the responsibility involved in their individual development. To every student are available the counsel and guidance of the faculty, and every resource at its disposal. But the faculty does not coerce students who are uninterested or unwilling to think for themselves.

The co-operative plan is thus designed specifically to provide actual working conditions which shall afford the student practical experience, give meaning to his program or study, and train him in reliability, efficiency, and team-work.

Correlation of Theory and Practice

Co-operating companies employ the students in the various departments of their establishments. The training is thorough. To derive the greatest value from his co-operative work the student is advised to continue in the employ of his co-operating firm for *at least one year* after graduation, since certain types of work which would afford him valuable experience cannot be made available to him while he is alternating between work and study. Statistics compiled over a period of many years show that on the average about fifty per cent of each graduating class do remain with their co-operating employers after graduation.

Co-operative Work Reports

The values to be derived from the practical experiences are further enhanced by required report writing. These co-operative work reports are written during the working periods by all co-operative students. A complete job analysis is required as the first report written on any new co-operative work assignment. Subjects of other reports are selected by the student after conference with his Co-ordinator of Co-operative Work, by whom they must be approved. The reports are designed to encourage observation and investigation on the part of the students and to help them to appreciate more fully the extent and value of their experience. These reports are carefully read by the Co-ordinator and are discussed with the student during the next following college period. Exceptionally valuable results are obtained from these reports. The value derived must necessarily be directly proportional to the conscientious and intelligent concentration of effort by the student upon this phase of the work.

Co-operative Work Records

Complete and detailed records are kept of the co-operative work of each student. They are based upon reports made by the employer at the end of each working period; upon occasional personal interviews between the employer and the Co-ordinator; and upon various evidences of the student's attitude toward all the phases of his co-operative work. It is not possible for the student to secure a degree unless this part of the curriculum is completed satisfactorily. These records of practical experience serve as a valuable future reference for the Alumni Placement Division of the Department.

Positions Available

The University cannot and does not guarantee to place students because of uncertainties of business conditions, as well as other reasons, beyond its control. Although the University in no way discriminates among students of various races and religions, considerable difficulty has been experienced in placing at co-operative work the members of certain racial groups together with those that are physically handicapped. However, past experience has demonstrated that students who are willing and capable of adapting themselves to existing conditions are almost never without employment except in periods of severe industrial depression.

Earnings

The rates of pay for students are low, primarily because the students are given the privilege of attending college on the co-operative plan. The employer thus feels justified in devoting time to the instruction of the students and in transferring them at reasonable intervals from one department to another.

For budgeting purposes the following scale of wages may be considered as the *minimum rates* to be paid the students in times of normal business.

\$12 per week for second year students

\$14 per week for third year students

\$16 per week for fourth and fifth year students

Statistical experience shows that the pay actually received by students averages appreciably above these figures.

Location of Work

It is the policy of the University to assign students to co-operative work within commuting distance of their homes. This is not always possible, however, and at times it may be necessary for students to live away from home in order to obtain satisfactory and desirable co-operative work assignments.

Types of Co-operative Work

Insofar as possible students are placed at co-operative work in that general field for which they express preference, provided that aptitude, physical ability, temperament and other personal qualities appear to fit them for this field. Usually students are placed first in the lower ranks of an organization where they may learn the fundamental requirements of the business.

For example, a student interested in manufacturing might be started as an operative on some machine in the plant. As his progress and other conditions warranted he would be transferred to other types of work such as shipping, inspecting, cost finding, adjusting complaints, or bookkeeping, and so on, so that in the course of his four years of co-operative training he would have the opportunity to acquire a substantial background in at least some of the functions of factory administration. This progressive type of training is more readily obtained in the employ of one company. A change of company each year provides more a change of environment than a progression of experiences.

Engineering companies, department stores, chain stores, wholesale houses, banks, manufacturing companies, public utilities, and many other types of enterprises are employing Northeastern students. In some cases definite training schedules have been established so as to permit the student one full year in each of several important departments.

Typical Co-operative Training Schedules

These schedules are arranged with the basic idea of giving the student a comprehensive training through the several different departments, but must of necessity be varied in accordance with the needs of those departments.

BOSTON & MAINE RAILROAD CO.

- ONE YEAR — Erecting Shop
- ONE YEAR — Machine Shop
- ONE YEAR — General work in Machine Shop and Erecting Shop
- ONE YEAR — Mechanical Engineer's Dept.

EDISON ELECTRIC ILLUMINATING COMPANY OF BOSTON

The schedule of the Edison Electric Illuminating Company of Boston is divided into the following general classifications. Very few co-operating students, if any, obtain experience in all branches, but progress from year to year in the respective branches as conditions require.

Standardizing

- (a) Testing and standardizing of electrical instruments
- (b) Miscellaneous standardization
- (c) Repairs on electrical instruments
- (d) Laboratory high voltage tests

Steam Practice

- (a) Turbine, engine and boiler tests
- (b) Instrument tests and repairs
- (c) Miscellaneous tests

Electrical Testing

- (a) Testing and repairing of electrical instruments in power stations and substations
- (b) Cable tests
- (c) High voltage tests on apparatus and in the field
- (d) Checking up construction work
- (e) Miscellaneous electrical tests

Chemical Engineering

(a) Fuel analysis

(b) Miscellaneous tests and analysis of oils, water paints and other materials

*Photography**Office Work*

HUNT-SPILLER MANUFACTURING CORPORATION

ONE YEAR General laboratory and plant work, including preparation of samples

Pyrometry

Use and care of Metallurgical apparatus

ONE YEAR Complete analysis of coal, coke, limestone, sand, iron, soil, etc.

ONE YEAR Keeping of general metallurgical records, filing, and making of reports

ONE YEAR Analysis for combined, graphitic, and total carbon with a complete knowledge of a carbon combustion apparatus

General Information

Tuition

The tuition is \$250 per year.

For this tuition charge Liberal Arts students may take up to 18 semester hours in each term of the freshman year and up to 12 semester hours in each of the upperclass terms. Engineering and Business Administration students take their prescribed curricula.

The semester hour charge for all work beyond the limit indicated above is at the rate of \$10 per semester hour.

Freshmen who carry less than 11 semester hours and upperclassmen who carry less than 9 semester hours pay the regular library and laboratory fee, the student activities fee, and tuition on the semester hour basis instead of the term basis. The charge for tuition on the semester hour basis is an initial charge of \$15 plus \$10 per semester hour.

General Library, Laboratory, and Materials Fee

All students are charged a general library, laboratory, and materials fee of ten dollars (\$10) each year. This fee is payable at the time of registration and is included in the schedule of payments on page 28.

Student Activities Fee

Each student in the Day Division is charged a student activities fee of fifteen dollars (\$15). This fee is payable at the time of registration and is included in the schedule of payments on page 28. This fee supports in part certain student activities, and includes membership in the *Northeastern University Athletic Association*, and subscription to *The Northeastern News*, the college paper.

The services of a physician are also available for all students under this fee. Minor ailments are treated by the college health officers without additional charge. Should the student show signs of more serious illness, he is immediately advised to consult a specialist or return to his home, where he can get further treatment.

Chemical Laboratory Deposit

All students taking chemical laboratory work are required to make a deposit of fifteen dollars (\$15) at the beginning of each year, from which deductions are made for breakage, rentals, and destruction of apparatus in the laboratory. Any unused portion of this deposit will be returned to the student at the end of the college year. In case the charge for such breakage, rentals or destruction of apparatus is more than fifteen dollars (\$15), the student will be charged the additional amount.

Schedule of Payments for Freshmen

Date Due	Tuition and Fees
September 8, 1938	\$150.00
February 6, 1939	125.00

Schedule of Payments for Upperclassmen

<i>Division A</i>	
*September 12, 1938	150.00
January 30, 1939	125.00
<i>Division B</i>	
*November 21, 1938	150.00
April 10, 1939	125.00

There will be a \$2.00 deferred payment fee added to all bills which are not paid by the Saturday following the date on which payments fall due. When further extensions of time are given on payments which have been previously deferred, an additional \$2.00 fee will be charged for each extension.

Failure to make the required payments on time, or to arrange for such payments, is considered sufficient cause to bar the student from classes or suspend him from co-operative work until the matter has been adjusted with the Director of School Administration.

Graduation Fee

A fee of ten dollars (\$10) covering graduation is required by the University of all candidates for a degree. This fee must be paid with the final tuition payment of the student's senior year.

Payments

All payments should be made at the treasurer's office. Checks should be made payable to Northeastern University.

Refunds

The University assumes the obligation of carrying the student throughout the year. Instruction and accommodations are provided on a yearly basis; therefore, no refunds are granted except in cases where students are compelled to withdraw on account of personal illness.

Expenses

The following tables, compiled from expense returns submitted by the student body, give an idea of freshman expenditures under ordinary conditions.

*Students taking Chemical Laboratory work pay a Chemical Laboratory deposit of \$15.00 additional.

Estimated College Expenses for a Freshman

Application Fee.....	\$5.
Tuition.....	250.
*General Library and Laboratory Fee.....	*10.
Student Activities Fee.....	15.
Books and Supplies.....	35.
	<hr/>
	\$315.

Freshmen in the College of Engineering should add approximately \$25 for the purchase of drawing instruments and equipment.

*Estimated Living Expenses Per Week for a Freshman
Residing Away from Home*

Room Rent.....	\$3.75
Board.....	7.00
Laundry.....	1.00
Incidentals.....	2.00
	<hr/>
	\$13.75

The figures given above are approximate and may not exactly fit the case of any one student; but they will be found to represent fairly well the cost to a freshman who lives comfortably but without extravagance.

Text Books and Supplies

The Northeastern University Bookstore is a department of the University and is operated for the convenience of the student body. All books and supplies which are required by the students for their work in the University may be purchased at the Bookstore. In addition, the Bookstore also carries a large number of general supplies. The main store is located in Room 259, Main Building. A branch of the store is operated in Room 23, Huntington Building, in which not only college supplies, but also a variety of other articles are sold to meet the needs of students.

Part Time Work

Students who find it necessary to accept part-time jobs, while attending college, may through the Director of Co-operative Work obtain spare-time work doing odd jobs.

No student is justified in assuming that the University will take care of his expenses or guarantee to supply him with work sufficient to meet all his needs.

*(In addition there is a Chemical Laboratory deposit of \$15 required of all Freshmen taking Chemistry.)

A student should have available a reserve fund adequate to provide for immediate needs and unexpected contingencies. This should ordinarily amount to at least the first year's tuition plus the student activity and other fees, room rent, and board for several weeks, or a total of about \$500.

Examinations

Examinations covering the work of the term are usually held at the close of each term. Exceptions may be made in certain courses, where, in the opinion of the instructor, examinations are not necessary.

Condition examinations will be given in all subjects during the week of July 10, 1939 for Division A students, and the week of September 4, 1939 for Division B students. Condition examinations are not given for laboratory courses.

Special examinations may be arranged for only by vote of the Administrative Committee and for all such examinations the University requires the payment of a special fee of five dollars (\$5).

Grades

A student's grade is officially recorded by letters, as follows:

- A superior attainment
- B above average attainment
- C average attainment
- D lowest passing grade, poor attainment (the faculty will accept only a limited amount of grade D work towards the Bachelor's degree)
- F failure, removable by condition examination
- FF complete failure; course must be repeated in class
- I incomplete, used for intermediate grades only and signifies that the student has not had time to make up work lost through excusable enforced absence from class.
- L used in all cases of the removal of a failure by condition examination or by attendance at summer term.

A student who does not remove a condition before that course is again scheduled, a year later, must repeat the course. A condition in more than one subject involves the loss of the privilege of being a candidate for graduation with the student's class, and may involve the loss of assignment to co-operative work.

The responsibility for the removal of a condition rests with the student, who is required to ascertain when and how the condition can be removed.

Dean's List

A Dean's List, issued at the end of each semester, contains the names of upperclass students who have an honor grade average in all subjects during the preceding period. Freshmen who achieve high scholastic standing are included on a Freshman Honor List, which is published at the end of each grading period. No student under disciplinary restrictions is eligible for either of the honor lists.

Report Cards

Freshman reports are issued at the end of each grading period; upperclass reports, at the end of each semester. In addition, a special report on review subjects pursued during the summer term will be issued immediately at its close. Questions relative to grades are to be discussed with the student's faculty adviser.

Students are constantly encouraged to maintain a grade of work which is of acceptable quality. Parents and students are always welcomed by the Dean of Students, the Director of School Administration, and advisers for conference upon such matters.

Parents or guardians will be notified in all cases when students are advised or required to withdraw from the University.

Conduct

It is assumed that students come to the University for a serious purpose, and that they will cheerfully conform to such regulations as may from time to time be made. In case of injury to any building, or to any of the furniture, apparatus, or other property of the University, the damage will be charged to the student or students known to be immediately concerned; but if the persons who caused the damage are unknown, the cost for repairs may be assessed equally upon all the students of the University.

Students are expected to observe the accepted rules of decorum, to obey the regulations of the University, and to pay due respect to its officers. Conduct inconsistent with the general good order of the University, or persistent neglect of work, if repeated after admonition, may be followed by dismissal, or, in case the offense be a less serious one, the student may be placed upon probation. The student so placed upon probation may be dismissed if guilty of any further offense.

It is desired to administer the discipline of the University so as to maintain a high standard of integrity and a scrupulous regard for truth. The attempt of any student to present, as his own, any work which he has not performed, or to pass any examina-

tion by improper means, is regarded as a most serious offense, and renders the offender liable to immediate expulsion. The aiding and abetting of a student in any dishonesty is also held to be a grave breach of discipline.

Scholastic Year for Seniors

Seniors of either division, who are candidates for a degree in the current year, must have completed all academic work, class assignments, theses, regular and special examinations, before twelve o'clock noon of the Saturday next following the close of recitations for seniors.

Attendance

Students are expected to attend all exercises in the subjects they are studying unless excused by the Director of School Administration. Exercises are held, and students are expected to devote themselves to the work of the University, between 9.00 A.M. and 5.00 P.M. except for a lunch period, on every week day except Saturday. Saturday classes are held only between 9.00 A.M. and 1.00 P.M.

No "cuts" are allowed. A careful record of each student's attendance upon class exercises is kept. Absence from regularly scheduled exercises in any subject will seriously affect the standing of the student. It may cause the removal of the subject or subjects from his schedule. In case he presents a reasonable excuse for the absence, however, he may be allowed to make up the time lost and be given credit for the work; but he must complete the work at such time and in such manner as his instructor in the course may designate.

Laboratory work can be made up only when it is possible to do so during hours of regularly scheduled instruction.

Absences from exercises immediately preceding or following a recess are especially serious and entail severe penalties.

Attendance at all mass meetings of the student body is compulsory. Exceptions to this rule are made only when the student has received permission from the Director of Student Activities previous to the meeting from which he desires to be absent.

Housing Regulations

The University endeavors to exercise due consideration and care for the student's welfare while he is in residence. This necessitates the adoption of the rules and regulations presented herewith.

1. Assignments will be made when the student registers.
2. Students may inspect rooms before accepting an assignment; after reaching a decision students must notify the office of the Director of School Administration, 351M.
3. Students who accept room assignments must retain them for the period of their residence, unless given permission by the Director of School Administration to change.
4. Students are not permitted to live in unsupervised quarters. Under no conditions are groups of students permitted to lease apartments without prior approval of the Director of School Administration and the Dean of the Day Division.
5. Students are not permitted to engage rooms without the prior approval of the University. Those violating this rule will be required to give up such rooms immediately and will be assigned by the University to approved quarters.
6. Violation of any of the above rules is considered a breach of discipline and will be dealt with accordingly.

Residence

It has been found to be much more satisfactory for the student to live within easy access of Boston, especially during periods in college, than to live out twenty-five or thirty miles. The saving of time and effort more than offsets any increased expense. Residence in Boston is advisable, as it gives the student opportunity to use the college facilities outside of class hours, and to confer more easily with his instructors about his college work.

Dormitories

At present the University does not maintain dormitories. Provision, however, is made for students to secure rooms in the vicinity. Many freshmen prefer to take room and board at the fraternity houses, which are all supervised by the University through faculty advisers. For information relative to such housing write the Director of Admissions.

Rooms in the dormitory of the Huntington Avenue Branch of the Boston Y.M.C.A. may be secured only through the Housing Department of the Y.M.C.A. The applicant must present himself in person to a representative of the Department before assignment will be made.

Applicants desiring to room in the Association dormitory are advised to write the Housing Department of the Huntington Avenue Branch, 316 Huntington Avenue, Boston, Massachusetts.

Buildings and Equipment

Boston — A Great Educational Center

THE fact that Northeastern University is in Boston broadens the educational and cultural opportunities of its students. Few other cities in the country are so rich in the finest elements of American life. Many of its historic buildings, such as the Old State House, Faneuil Hall, and the Old North Church, have become museums for the preservation of old documents, paintings, and other collections representative of early Colonial life. The Boston Public Library and the Museum of Fine Arts, both within a few blocks of the University Buildings, are widely noted for their treasures of literature and art. Even nearer to the University is Symphony Hall, home of the world-famous Boston Symphony Orchestra. And the many churches within Greater Boston not only afford the opportunity of hearing distinguished preachers but through their student clubs and young people's societies make possible for students a fine type of social and intellectual life.

Location

The University is at present housed in three buildings: the Main Building, the Laboratory Building, and the Huntington Building.

These buildings, located on Huntington Avenue, just beyond Massachusetts Avenue, are within easy access of the various railroad stations and the business and residential sections.

A new building, to cost approximately \$900,000, is now under construction. This building will comprise a basement and four stories and will provide 100,000 sq. ft. of floor space. Mechanical engineering laboratories, chemistry laboratories, and a number of classrooms and lecture halls, as well as the administrative offices of the University will be housed in this building, which is to be the first unit of the new Northeastern University plant. It is expected that this building will be ready for occupancy in September 1938.

A map indicating the location of University Buildings is shown on page 36.

Transportation

The chief railroad centers of Boston are the North and South Stations. From the North Station board a car going to Park Street, at which junction transfer to any Huntington Avenue car. At South Station board a Cambridge subway train for Park Street Under. There change to a Huntington Avenue car and alight at Gainsborough Street, at the Main Building of Northeastern University.

Administration Building

In the administration building, besides various offices, there are libraries, classrooms, reading rooms, and social rooms.

Activities Assembly Hall

The Jacob P. Bates Hall has a seating capacity of 400. A large stage, suitable for entertainments of various kinds, is available. The hall is equipped with a motion picture machine.

Bates Hall is an important center for various student activities. Here the band and the orchestra have their rehearsals, the glee club gives its entertainments and some of the dramatic work is presented. Numerous student socials and small group dinners frequently are held here.

Recitation Building

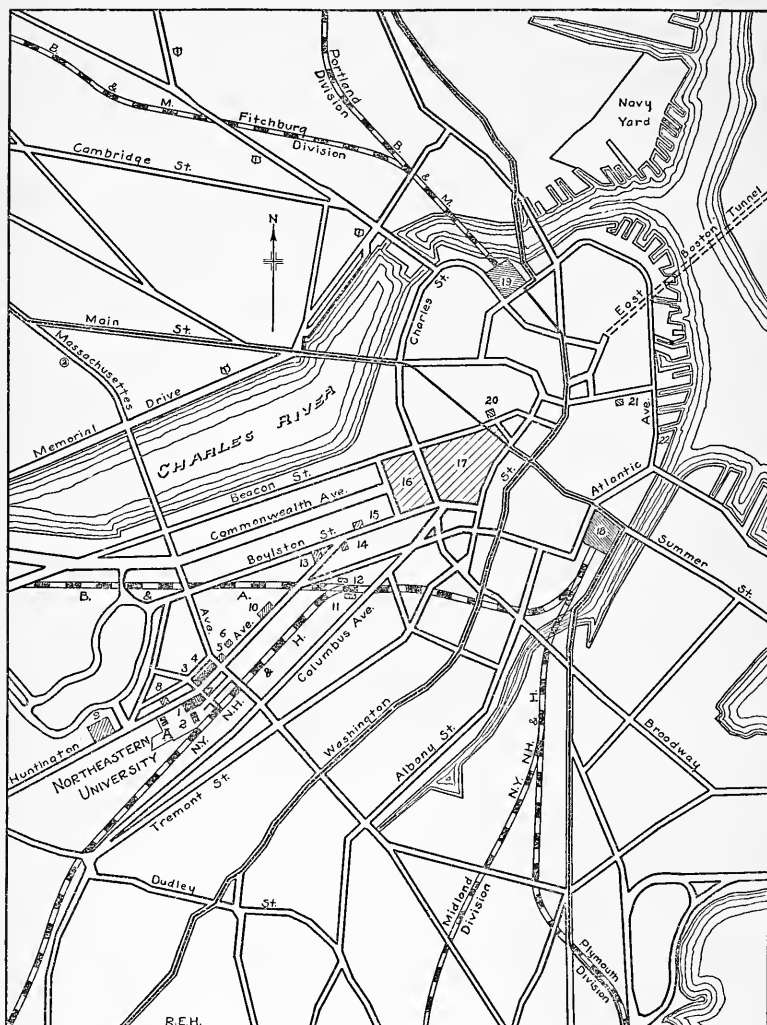
The Recitation building is 196 feet long and 58 feet wide and six stories high; in the basement are the heating and ventilating plants. The first floor is taken up with game, social and club rooms, and a small assembly hall seating 150. On the second and third floors are located classrooms and offices. The fourth floor contains a science lecture room completely equipped, a physics laboratory, three chemical laboratories, three drafting rooms, two recitation rooms, and department offices. The fifth and sixth floors are used as dormitories.

Natatorium

This building, one of the finest of its kind, is located between the Assembly Hall and Gymnasium, and is easily accessible from the locker rooms of the latter. The swimming pool, 75 feet long by 25 feet wide, is supplied with filtered water and is heated to the proper temperature by an elaborate system of pipes.

Gymnasium

This structure, the funds for which were provided by the relatives of the late Samuel Johnson, is known as the Samuel Johnson Memorial Gymnasium. The gymnasium provides the following facilities: three gymnasiums, a twelve-lap running track, two large exercise rooms, boxing and wrestling rooms, handball and squash courts, bowling alleys, showers, steam baths, massage rooms, and electric cabinet baths.



MAP SHOWING NORTHEASTERN UNIVERSITY AND VICINITY

Key to Map
Northeastern University and Vicinity

- A.** FIRST BUILDING OF NEW NORTHEASTERN PLANT
1. MAIN BUILDING
 2. LABORATORY BUILDING
 3. HUNTINGTON BUILDING
 4. SYMPHONY HALL
 5. HORTICULTURAL HALL
 6. CHRISTIAN SCIENCE CHURCH
 7. NEW ENGLAND CONSERVATORY OF MUSIC
 8. BOSTON OPERA HOUSE
 9. BOSTON MUSEUM OF FINE ARTS
 10. MECHANICS EXHIBITION HALL
 11. BACK BAY STATION
 12. TRINITY PLACE
 13. BOSTON PUBLIC LIBRARY
 14. TRINITY CHURCH
 15. MUSEUM OF NATURAL HISTORY
 16. BOSTON PUBLIC GARDEN
 17. BOSTON COMMON
 18. SOUTH STATION
 19. NORTH STATION
 20. STATE HOUSE
 21. U. S. CUSTOMS HOUSE
 22. ROWES WHARF

Lecture Assembly Halls

Through special arrangement, Jordan Hall, Symphony Hall, and the Boston Opera House are made available for assembly purposes. These halls provide ample space for student activity assemblies and for special lectures by noted men. All the students in college at any period assemble for one hour each week throughout the college year. More than half of the assembly sessions are devoted to interests and activities developed by the students themselves. The other assembly periods are devoted to special lectures, sometimes under the direction of the student body and sometimes under the direction of the faculty. The special lectures are devoted to those elements of life which count most in the development of a man's viewpoint and his character.

Huntington Building

In addition to the large recitation building previously mentioned the Huntington Building provides a large area for class rooms and offices. In this building are the lecture and assembly rooms for large groups within the student body; the General Physics and Advanced Physics Laboratories; a Branch Library; the special class rooms for Physics and Mechanical Drawing; and student social and reading rooms. In the Huntington Building are also located offices of the Director of Student Activities, Director of Health and Physical Training, Executive Secretary of the Northeastern Student Union, and most of the student advisers. Thus the student body is brought directly into contact with the various members of the faculty.

Laboratory Building

The Laboratory Building is located directly behind the Main Building. In it are the Biological Laboratory, the Mechanical, Electrical and Chemical Engineering Laboratories, and Electrical Measurements Laboratory, and offices for a number of the faculty, as well as conference rooms for students. There are a number of recitation rooms of the non-laboratory type and a large drafting room. The Laboratory Building contains a large variety of equipment for experimental purposes in the various fields of industry.

Equipment for Physical Training

Northeastern has exceptional facilities for all-round physical training. The gymnasium is one of the most complete in New England. Adjoining the building is a large field equipped for athletics. Here are four tennis courts, outdoor gymnasium, rifle range, baseball cage, basketball court, jumping pits and a track with a 100-yard straightaway.

Northeastern University owns and operates a large athletic field a short distance from the University. This field, known as the Huntington Field, provides ample facilities for track, baseball, football, and other outdoor sports. A bus service maintained between the field and the University makes it possible for students to get back and forth with a minimum loss of time. A new and commodious field house has recently been erected at the field as well as ten sections of stadium seats capable of seating 2,000 spectators.

Design and Drafting Rooms

The University possesses large, light, and well-equipped drawing rooms for the carrying on of the designing and drafting which forms so important a part of engineering work. These rooms are supplied with lockers containing the drawing supplies, and files containing blue prints, and photographs of machines and structures that represent the best practice. Drafting room blackboards are equipped with traveling straight edge devices which facilitate speed and accuracy in blackboard demonstrations.

Libraries

The library service of Northeastern University comprises the following units:

1. The Main Library, located on the second floor of the Main Building, includes three reading rooms in which are available all of the general reference books, many of the professional and scientific volumes, and all of the periodicals (approximately 100) to which the University subscribes. This library is under the direction of a librarian and two assistants, all of whom have had special training for the work. Main library hours are as follows:

9:00 A.M. to 10:00 P.M. Daily
2:00 P.M. to 9:00 P.M. Sundays
12:00 M. to 9:00 P.M. Holidays

2. The Branch Library, located in the University's Huntington Building, houses most of the books on engineering and management with the exception of those in the field of chemical engineering which, for greater convenience of students in this department, are kept in the Main Library. The Branch Library is in charge of a corps of student assistants and is open from 8:45 A.M. to 5:15 P.M. daily except Sundays. Students have access directly to the shelves which contain books on reserve for particular courses as well as general reference works.

3. A general reading room and library is maintained by the Northeastern Student Union in Room 26 of the Huntington Building. The books located here are chiefly non-technical works dealing with contemporary affairs, religious problems, international relations, travel, etc. among which students may browse during periods of relaxation. A few of the literary and religious periodicals are also available in this room.

4. Special departmental libraries are maintained by the various instructional departments in the Day Division. These are kept chiefly in the offices of instructors where the books may be assigned to individual students or to groups for special reports or thesis work. Such books are catalogued in the Main Library but are permanently assigned to the instructional departments concerned.

Boston Public Library

All members of the University, whether resident or non-resident students, have the privilege of taking books from the Boston Public Library and of using the library for general reference and study. Inasmuch as this is one of the best in the country, it presents unusual opportunities to the students. Within a five minutes' walk from the University, it enables students to have unlimited reference at any time to books and periodicals bearing upon their studies.

Laboratory Equipment

Field Instruments of Civil Engineering

THE Department of Civil Engineering is provided with a variety of excellent equipment for field work. The instruments have been chosen to make possible the working out of advanced as well as elementary field problems, and to acquaint the student with the principal makes and types of instruments in general use.

For compass work there are seven compasses and an assortment of steel and wood range poles. Probably no better location could be found for demonstrating to students the phenomenon of local attraction than the immediate vicinity of the University. For measuring angles and elementary traverse work, the following equipment is available:

- 2 Keuffel and Esser one minute transits
- 5 Buff and Buff one minute transits
- 2 Berger one minute transits
- 2 Wissler one minute transits
- 1 Gurley one minute transit
- 1 Poole one minute transit
- 1 Hutchinson one minute transit

For elementary differential leveling or profile leveling the following instruments are available:

- 2 Keuffel and Esser levels
- 3 Berger levels
- 3 Buff and Buff levels

Both Wye and Dumpy levels are included among these.

For instruction in surveying, the College also possesses a sufficient number of steel tapes, metallic tapes, range poles, and Philadelphia level rods completely to equip all of the field parties in the various surveying courses at the same time. Some of these field parties can be supplied with Lenk tape rods or with Boston rods.

Traverses run in the course in Surveying I are required to conform with the quality of workmanship set forth by the Massachusetts Land Court "Class A" regulations. The following equipment is reserved for such work and for thesis preparation:

- 2 Berger 30 second transits
- 2 Buff and Buff 30 second transits
- 1 Berger one minute transit
- 1 Buff and Buff one minute transit

All of these transits are nearly the same, having $6\frac{1}{4}$ " horizontal circles equipped with full vertical arcs. For measuring horizontal distances the field parties are fully equipped with Lufkin (instantaneous) No. 236D tapes. These tapes are compared and carefully checked with the Invar tape before being used.

For topographical work there are available seven plane table outfits: 2 Buff and Buff, 2 Gurley, 2 Keuffel and Esser, and 1 Berger. All of the transits in the Civil Engineering Department are equipped with stadia hairs. In both the plane table and stadia surveying the College is equipped to send out either stadia rods or Philadelphia level rods.

For hydrographic surveying there is a Gurley electric current meter with the necessary rods and recording apparatus for making stream flow observations. A sextant is available for measuring angles in connection with hydrographic surveying.

Triangulation Station

The College of Engineering has set on the roof of the Main Building a triangulation station known as "Station Northeastern" and established as part of the regular course from Massachusetts triangulation Stations State House and Mt. Auburn. The latitude and longitude of this station have been accurately checked in a thesis run from important triangulation points in eastern Massachusetts. A tripod signal can be erected on Station "Northeastern." Other triangulation stations located on such hills as Corey Hill and Parker Hill are available for use of Northeastern students. For measuring the angles of a triangulation scheme the department possesses a 20 second precise Buff and Buff triangulation transit and a Berger 10 second repeating theodolite. An Invar steel tape manufactured by Société Genevoise d'Instruments de Physique, which has been calibrated and checked by the Bureau of Standards, is used for base line measurements and for checking the steel tapes.

Levels and Level Rods

For ordinary precise work such as is done in the average city or town for bench mark control, the following equipment is available: Bausch & Lomb precise level and a Berger precise engineer's level. The College is also equipped for doing barometric leveling, for which it has an aneroid barometer manufactured by Reynolds of England. For accurate checking of these bench marks and comparing them with the United States geodetic work and for comparing bench marks with those found in various cities and towns with the Boston Base and the U. S. Geodetic Base, there are a Buff and Buff Coast and Geodetic level and a Gurley Coast and Geodetic level rod.

For solar observations a Berger 1 C 30 second transit equipped with prismatic lens and a Berger solar attachment is used. Two of the 30 second transits are equipped with 45° mirrors in the sun shades and full vertical arcs for making polaris observations.

Demonstration Models

The Department of Civil Engineering has had constructed a number of brass and wooden models of typical engineering structures. The following are kept conveniently at hand for classroom demonstrations.

1.

Floor Beam Connection to Girder — Through Girder Railway Bridge. Model one-third size. (Shows also, typical knee brace connection to floor beam and girder as well as lateral bracing in plane of bottom flange.) Model is constructed of white wood with rubber-headed nails for rivets.

2.

Bottom Chord Joint Detail (L_2) of a 150' Span Single Track Through Steel Railway Bridge of the Warren Type. Model is of white pine and one-quarter full size.

3.

Top Chord Joint Detail (U_2) of a 150' Span Single Track Through Steel Railway Bridge of the Warren Type. Model is of white pine, one-quarter size, and shows lateral and sway bracing.

4.

Hip Joint Detail (U_1) of 150' Span Single Track Through Steel Railway Bridge of the Warren Type. Model is one-third size and white pine. It shows a typical example of portal bracing.

5.

Complete Model of 80' Span Single Track Through Girder Bridge. Model is an exact reproduction, one-sixteenth full size, using brass plates and angles of uniform thickness (0.040") and riveted together with 1-16" diameter copper rivets.

The bridge is reproduced from a complete design previously made and including web and flange splices.

Mechanical Engineering Laboratories

The Mechanical Engineering Department has well equipped laboratories, containing new and modern machines run by steam, gasoline, water, and electricity. A separate high-pressure steam line connected directly with the boilers in the University's main power plant enables the steam-driven apparatus to be run with steam under full boiler pressure.

Steam Apparatus

The steam apparatus includes the following equipment. A Uniflow steam engine of fifty horsepower capacity and of the latest design, so equipped that a complete engine test may be run on the machine. The auxiliary apparatus connected with the engine includes a prony brake for measuring the output of the machine while a surface condenser is tied in with the exhaust line in order to obtain the steam consumption.

A Chicago steam-driven air compressor is arranged to make complete tests on both the steam and air ends of the machine. This compressor is also connected to a surface condenser.

A Warren direct-acting steam pump is connected up to run a standard pump test, the steam end being tied in with a surface condenser and the water end with a rectangular weir for measuring the quantity of water delivered by the pump.

A twelve horsepower Curtis steam turbine of the impulse single-stage type, to which is directly connected an absorption dynamometer or water brake, is available for testing. The steam end of this turbine is piped to a Worthington surface condenser and also to a Schutt-Koerting ejector condenser.

A small Sturtevant horizontal steam engine is equipped for a complete test with a prony brake for the measurement of power output.

Other steam-driven apparatus includes a steam pulsometer pump, a steam injector, two small vertical steam engines for valve setting experiments, a heat exchanger for determining heat transfer between steam and water and a Lee steam turbine of twelve horsepower rating driving a two-stage centrifugal pump.

Apparatus is also available for experiments on the flow of steam through an orifice and for the determination of moisture content in steam through the use of throttling and separating steam calorimeters.

Power Plant

The steam power plant is also used for testing purposes. The plant is equipped with the necessary tanks and scales for weighing the feed-water; steam pressure gages; scales for weighing coal and ashes; draft recorders; Orsat apparatus; CO₂ recorder; electrical meters; thermometers; steam engine indicators; and other equipment necessary for complete power plant tests. The plant consists of four horizontal return tubular boilers, each of 1711 square feet of heating surface. Three of these boilers are equipped for burning coal and one for burning fuel oil. There are the various auxiliary appliances, such as feed-water pumps, feed-water heater, fuel oil pumps and heaters, automatic damper regulator, and steam and oil separators. The steam line of the Mechanical Laboratory is connected to a General Electric recording steam flow meter, while in the boiler feed-water line is located a water meter of the Buffalo make.

In the Engine Room are located four three-wire direct current generators, three of which are driven by Ridgeway reciprocating steam engines while the fourth generator is direct-connected to a Westinghouse-Parsons steam turbine.

Hydraulic Equipment

The hydraulic equipment in the laboratory includes a two-stage centrifugal pump with a dual drive or separate drive as may be desired. The drive is either direct from a fifteen horsepower direct current motor or else direct from a Lee single-stage steam turbine.

A six-stage centrifugal pump direct-connected to a forty horsepower direct current motor has been installed for testing purposes. The motor, through a speed regulator, has a range in speed from 900 R.P.M. to 2200 R.P.M. The pump is rated at 180 G.P.M. against a head of 450 feet. The capacity of the pump is measured by a Venturi tube of the latest design. There is also a rotary pump driven direct by an electric motor.

Other machines for hydraulic experiments are a triplex power pump, driven by a three horsepower electric motor, a hydraulic turbine of the Pelton Wheel type, a small single-stage centrifugal pump driven directly by a $\frac{3}{4}$ -horsepower gasoline engine, a triangular and a rectangular weir for measuring quantities of water discharged by the various pumps in the laboratory, besides the necessary tanks, platform scales, and hook gauges.

Internal Combustion Engines

Under the internal combustion laboratory equipment may be listed a Fairbanks-Morse ten horsepower gasoline and oil engine, so arranged that tests may be run with various kinds of fuels, and complete test data obtained; a new Plymouth automobile engine arranged to run tests with different fuels and carburetors; and two gasoline airplane engines for demonstration purposes.

Several Diesel engines of various types have been installed, including a 30 H.P. high speed Fairbanks-Morse machine driving a 19 K.W., D.C. Generator, an auto truck Diesel, and two small engines for dismantling and demonstration purposes.

Refrigeration, Heating, and Air Conditioning

The refrigeration equipment includes a $\frac{3}{4}$ -ton Frick ammonia refrigerating machine equipped with a double pipe condenser, ammonia weighing tanks and a specially designed indicator, and a standard air-cooled Frigidaire sulphur dioxide machine. Both of these machines are arranged for testing purposes. A Triumph compressor is also available for demonstration work. Apparatus for the determination of heat transference through various substances is available.

A constant temperature room is equipped with apparatus for either heating or cooling. Additional equipment consists of a warm air pressure system with Timken oil burner equipment and complete automatic controls, a Fedders type unit heater, and oil burning equipment and controls for demonstration purposes.

For fan testing, a multi-blade blower of Sturtevant manufacture driven by an electric motor is set up for running different tests with varying capacity.

A Carrier air conditioner, motor driven, and equipped with automatic humidity control, is arranged for testing.

Testing Material and Heat Treatment Equipment

The testing materials equipment includes a 50,000 pound Olsen Universal Testing Machine equipped for tension, compression, transverse bending, and shearing tests; a 2,000 pound automatic shot cement tester equipped with transverse tools; a 10,000 inch pound Riehle torsional testing machine; a 220 foot pound Riehle impact tester for Charpy Izod or tension tests; a White-Souther motor driven fatigue tester holding two specimens at one time; and a Ro-Tap sieve shaker with time switch and sieves for mechanical analysis of aggregate. Among the measuring instruments are Brinell and Olsen-Firth hardness testers; extensometers for tension, column, and beam tests, and a torsion meter.

For heat treatment, an electric furnace and a Stewart triple-purpose gas-fired furnace are available with pyrometers for temperature measurements.

For studying the effects of heat treatment, a large metallographic outfit of Bausch & Lomb make is used. This apparatus makes possible a magnification of from 125 to 2600 diameters for inspection and taking photographs of crystalline structures of metals. Equipment is available for polishing and etching specimens in preparation for examination of the crystalline structure of the metal being studied.

Polaroid equipment for photo-elastic stress analysis is also available.

Miscellaneous Equipment

In addition to the apparatus mentioned above, the oil testing equipment includes a Saybolt Universal viscosimeter for viscosity determination, a Cleveland open cup tester for determining the flash point and fire point of different grades of oil, a Conradson carbon residue apparatus, a steam emulsion apparatus, a water power centrifuge, a cloud and pour test apparatus, a Union oil colorimeter for color number determination, and a Thurston friction oil tester for determining the durability and lubricating prospects of oils.

An Emerson fuel calorimeter is used for finding the calorific content of solid and liquid fuels, and a Junkers gas calorimeter is available for determining the heat content of gaseous fuels. For calibrating gages, two dead weight gage testers of 200 pounds and 500 pounds capacity are used for pressure gages, while for vacuum gages a water aspirator and a motor driven vacuum pump are available.

For measuring the flow of water in pipe lines, a Pitot tube, orifice, Venturi meter, and water meter are located in a pipe line for testing.

Apparatus for measuring flow of air includes a Pitot tube, an orifice, and an anemometer, besides the necessary draft gages.

Apparatus for measuring flow of steam consists of a calibrated orifice and a steam flow meter. A recording steam pressure gage is also available.

An experiment on "Friction of Drives" includes apparatus consisting of three pulleys of different materials with three different kinds of belts, which make possible nine tests with various combinations.

A motor-driven vacuum pump with a rated capacity of six cubic feet of free air per minute under $29\frac{1}{2}$ inches of mercury vacuum is available for tests.

Included among the measuring instruments are five steam engine indicators, two internal combustion engine indicators, four hand tachometers (centrifugal type) with three speed ranges from 0 to 4000 R.P.M., one tachograph, one tachoscope, one rotoscope for speed and vibration determinations, one recording thermometer, planimeters, revolution counters, thermometers, pressure gages, and a portable strobotac.

A small machine shop is used for maintenance work of the laboratory and for thesis work. The machines available are a sixteen-inch motor-driven South Bend engine lathe, two belt-driven engine lathes, a vertical drill press, a small vertical drill, a horizontal milling machine, a shaper, a power hack saw, a motor driven double emery wheel, an arbor press, two nine-inch South Bend Workshop lathes, and an Eisler spot welding machine. There are also an anvil and a small hand forge for forging purposes.

Electrical Engineering Laboratories

A large area in the basement of the Laboratory Building is given over to electrical laboratories which are of three types: the dynamo laboratory, the measurements laboratory, and the high tension laboratory.

Dynamo Laboratory

This laboratory is equipped with sixty generators and motors of different types, the size and voltage ratings being selected to

reduce as much as possible the risk from high voltage apparatus while making available to the student commercial apparatus such that the various quantities it is desired to measure will be of reasonable dimensions.

Machines from five to twenty-five kilowatt capacity are used principally for this reason, but also because the student in his engineering practice early comes in contact with large and varied machinery in power houses and electrical plants generally.

For D. C. working, among others there are two sets of specially matched direct current six-kilowatt, 125-volt compound generators, which will work as shunt machines. Both pairs are driven individually by 15 H.P., 230-volt motors and used principally for parallel operation and similar work. A large 230-volt, 12 H.P., 200 R.P.M. Sturtevant motor is used for retardation tests, and an assortment of series, shunt and compound motors each fitted with brake pulleys, are used for routine motor testing.

A. C. Machinery

For A. C. working there is a fifteen-kilowatt (unity p.f.) three-phase, 240-volt alternator driven at sixty cycles, and a 7.5 kilowatt G. E. machine with special armature taps so that it may be used as single-phase, two-phase, three-phase, or six-phase synchronous motor.

There are also two 12.5 kilowatt (eighty per cent, p.f.) G. E. machines having each armature coil tapped out separately and giving various phase arrangements; a five-kilowatt Holtzer Cabot machine with three rotors, making it available as either a squirrel cage, wound rotor, or synchronous machine; a G. E. single-phase clutch motor, a type R. I. induction motor, a Wagner single-phase motor; two Wagner motors arranged for concatenation control, one five-kilowatt Holtzer three-phase synchronous converter, a Westinghouse 7.5-kilowatt two-phase motor, a ten horsepower Fynn-Weichsel Unity power factor motor, and a Westinghouse Synchronous Converter (10 kilowatt, 240 D.C. volts; one, three, and six phase; sixty cycles).

Auxiliary Equipment

For transformers there are six single-phase G. E. type H units wound for 550 volts and 220-110 volts; a set of transformers with Scott connection taps, and a Type R.O. constant current transformer, primary winding for 220-190 volts and secondary for 6.6 amperes, 310. volts maximum fitted with a load of eighty candle power 6.6-amperes, sixty-watt nitrogen filled tungsten lamps, and a pair of 550-220 110 volts G. E. three-phase transformers of 5-kva capacity. There is also a full equipment of necessary control and regulating appliances and eleven movable test tables fitted with the necessary terminals, switches, circuit breakers, etc., for

setting up the various combinations required from time to time. Each student when performing an experiment does the complete wiring, no apparatus in the laboratory being permanently wired up except as to its normal, self-contained circuits.

Power is supplied over a special set of feeders, from the Boston Edison system.

There are also speed governors and Tirrel regulators, both A.C. and D.C., capable of being used with any special machines found desirable at any particular time. An Edgerton Stroboscope has recently been added to the laboratory equipment.

High Tension Laboratory

For high tension work there have been installed a pair of General Electric transformers of 4 kva. capacity giving 50 kilovolts. A special room in the laboratory has been equipped for cable and insulation testing. The auxiliary equipment includes the necessary sphere gaps, induction regulators, calibrated voltmeters, etc., the transformers being supplied from a special motor-driven generator. The set has been supplied with the necessary kenotron tubes and controls for the rectification of the high potential alternating current for direct current working.

A 4000 ampere, low voltage transformer with regulator for current control is available for the study of the effects of heavy currents in conductors, switches, and contacts.

Electrical Measurements Laboratory

This laboratory is equipped with apparatus of two distinct types: first, that planned fundamentally for teaching the principles of measurements and, second, that which is used in teaching advanced standardizing methods as well as for keeping the instruments in daily use in the other laboratories properly calibrated.

It is supplied with a set of small storage cells for calibration work and a set of twelve 500-ampere-hour cells for current work.

The apparatus utilized in the first type of work includes the customary devices used for resistance, potential, energy, and magnetic measurements such as slide wire and Wheatstone bridges, Poggendorf's E.M.F. comparison, D. C. watt hour meter calibrations, magnetic comparitor, etc.

The second type of work uses the following Leeds and Northrup equipment: Precision Kelvin Double, Carey Foster, and Wheatstone Bridges; two type K potentiometers with auxiliary apparatus of volt boxes, standard cells, standard shunts of 10 and 100 ampere capacity, a set of resistance standards of the N. B. S. type and another of the Riechsanstalt patterns; a complete set of Inductance and Capacity Standards. For secondary standards of voltage and current the laboratory is equipped with Weston Electrical Instrument Corporation instruments with the necessary transformers.

Other equipment includes a Westinghouse three element oscillograph with full equipment, including a variable 1000 ampere standard shunt, fast and slow film holders; a phase shifter, G. E. rotating standard, and numerous types of A.C. watt hour meters. In the field of electronics and communication the following General Radio equipment is used: audio frequency meter; precision wave meter; low frequency oscillator (25-70,000 cycles); intermediate frequency oscillator; capacity, inductance, universal, radio frequency, and vacuum tube bridges; two electron oscillographs with Bedell sweep circuits with special auxiliary equipment; Edgerton Stroboscope; and a variety of wave filters of the low, high, and band pass types. The laboratory is equipped with a Leeds and Northrup Vreeland oscillator; G. E. vacuum tube voltmeter; "Comet-Pro" superheterodyne receiver for radio frequency bridge balancing.

The following equipment has been constructed by the department: an attenuator; A.C. and D.C. artificial telephone line; beat frequency oscillator; multi element electrically driven contactor for use with cathode ray oscillograph; magnetostriction and Quartz crystal oscillators; multi vibrator and numerous amplifiers, power packs, oscillators, vacuum tube voltmeters, etc.

Briefly, the laboratory is equipped for practically any work in electrical measurements outside of the absolute determinations as carried on in national standardizing laboratories.

The Instrument Room is supplied with eighty-five high grade General Electric Company and Weston Electric Instrument Corporation alternating current voltmeters and ammeters, with a number of potential and current transformers, and with nine polyphase and sixteen single-phase indicating wattmeters, each of double current and double voltage ranges.

For direct current working there are seventy-five voltmeters (of triple range), ammeters and millivoltmeters of the above makes. There are twenty-five standard shunts of ranges from 10 to 100 amperes with uniform drops of fifty millivolts to go with the millivoltmeters.

There is also a large and varied assortment of auxiliary equipment such as sliding rheostats for circuit control, non-inductive loading resistance, air core loading reactances, frequency indicators, power factor indicators, etc.

Chemical Laboratory Equipment

For experiments and investigations in chemical engineering and chemistry the following equipment is provided.

Chemical Engineering Laboratories

This laboratory is well equipped for the study of the various unit operations. Filtration is studied by performing experiments

on the Shriver plate and frame press, the Sweetland pressure filter, the Filtration Engineers Incorporated Rotary Vacuum Filter, and special oil filtration equipment. For the study of distillation a Badger 48 gallon still, 15 plate rectifying column, condenser and receiving tanks are available. This unit is designed for steam, pressure, and vacuum distillation. The rectifying column can be shunted off for use as an absorption column.

A Stokes vacuum shelf drier with a condenser built into the base, and a Carrier processing cabinet with temperature and humidity control, serve for drying materials scientifically. Evaporation and crystallization are studied in a steam-jacketed evaporating kettle and vacuum equipment. A jaw crusher, a ball mill, ten-inch Sturtevant crushing rolls, and a Rotap sieve shaker complete the crushing and grinding equipment. Mechanical separation is studied by means of the Rotex screen, the Federal air classifying unit, specially constructed hydraulic classifying equipment, and the Fletcher Centrifugal which can be operated as a separator, an extractor, or a centrifuge. An orifice, a Venturi meter, and a Pitot tube are used for measuring fluid flow. Flow of heat is studied under varying conditions in the steam-jacketed mixing kettle in a specially constructed pipe heat exchanger, and in insulation testing equipment. Simpson and other mixers, tanks, pumps, steam traps, and other accessory equipment serve to supplement the above units.

Analytical Chemistry Laboratory

The laboratory for analytical chemistry is fully equipped for giving instruction in the usual undergraduate courses. Each student is supplied with the necessary Pyrex and Kimble laboratory glassware, Sillimanite and Coors Porcelain, and the standard pieces of hardware. Special equipment of all types including an ample supply of platinum ware is available at the stockroom.

One of the features of this laboratory is the available supply of compressed gases, including oxygen, hydrogen, carbon dioxide, and hydrogen sulfide, the last mentioned being conveyed to the hoods by a special line of hard rubber piping.

The electrical equipment includes a Kimley electro-analysis machine for the determination of copper, lead, nickel, and zinc; two Leeds and Northrup potentiometers with accessories which can be adapted to pH. determinations, potentiometric titrations, and the investigation of conductivities of solutions; a Hevi-duty electric furnace for use in ignition and combustion work; a Hoskins electric combustion furnace suitable for use in steel analysis; a Freas drying oven capable of adjustment for various temperatures; and numerous electric hot plates and sand baths. For these power is available in 220, 110, 12, 6, and 2 volts D.C., and 110 volts A.C. There are also available the necessary ammeters, voltmeters, galvanometers, and pyrometers.

Organic Chemistry Laboratory

This laboratory is adequately equipped for undergraduate courses in:

- (a) Preparation of organic compounds.
- (b) Qualitative analytical work.

The molecular weight determination apparatus consists of a Victor Meyer outfit and several Dumas flasks.

For electro-chemical work rheostats, voltmeters, ammeters, and a converter capable of delivering alternating current at 11 amperes are available.

Drying operations are carried out with the aid of a steam-heated drying chamber, and electrically-heated drying oven, drying pistols, and vacuum dessicators.

Other equipment consists of several mechanical stirrers, mercury seals, hot water funnels, extraction outfits, and a combustion furnace.

Several vacuum pumps are available, including a Cenco-Pneumavac vacuum pump.

Steam lines on the benches supply the steam for steam distillations, eliminating the necessity of individual steam generators.

Industrial Chemistry Laboratory

The laboratory is used by students taking Chemical Plant Design and for thesis research. It is equipped with high pressure steam, compressed air, vacuum, high and low voltage lines, and other facilities usually found in a chemical laboratory. Pipe-fitting tools and shop facilities are available for the construction of special equipment as the demand arises. Some of the standard pieces of equipment in this laboratory are: Premier Colloid mill, Freas electric oven, high temperature gas furnace operated by a centrifugal blower, Vorce chlorine cell, Carver electrically heated hydraulic press, and a Holtzer-Cabot 10 volt, 200 ampere motor-generator unit for studying electrochemical processes, such as electrolysis, electroplating, and electroforming. Agitators, pyrometers, voltmeters, ammeters, rheostats, and other accessory equipment are found in this laboratory.

Lecture Demonstration Equipment

Classroom instruction is made more effective by the use of motion pictures and lantern slides. For this purpose, there are available moving picture projectors for 16 mm. and 35 mm. films, and a lantern slide projector. A portable day-light screen eliminates the necessity of totally darkening the room, thereby enabling the students to take notes while viewing the pictures. The lantern slide library consists of sets of slides adapted for the following courses: chemical engineering, industrial chemistry, inorganic chemistry, and history of chemistry.

Various models are available for demonstrating atomic structure, crystal structure, and stereo-isomerism. An especially constructed slide-rule and a copper chromate electrolytic cell are used to illustrate the migration of ions.

Cathode ray tubes, electrochemical cells, electrical conductivity apparatus, and a cell to show the conductivity of fused salts, supplement the lecture material of electrochemistry.

A portable standard orifice is used in the study of flow of fluids.

Industrial Engineering Equipment

Students in the Department of Industrial Engineering share in the use of the Mechanical Engineering Laboratories, and in addition, have available for laboratory work in accounting and statistical methods all of the commonly used office machines. These are available in a special room together with necessary library services, including Moody's Manuals, Poor's Manuals, and various charts and maps.

The laboratory is in charge of an assistant instructor whose work is to maintain the equipment in excellent condition and to give instruction in the use of the various office machines.

Principal pieces of equipment in the laboratory include duplicators, typewriters, hand and electric calculators, and both hand and electric adding machines.

For time study and micromotion study there are available a microchronometer, time study boards, decimal stop watches, micromotion films, and several types of 16 and 35 mm. motion picture projectors. In courses in which they can be used to good advantage motion pictures are frequently scheduled.

Biological Laboratory

The Biological Laboratory, a large, well-lighted room containing six dissecting tables, can accommodate thirty-six students.

General equipment includes simple and compound microscopes, binocular dissecting microscopes, microscopical stains, staining solutions, physiological preparations, reagents, chemicals, and glassware.

The zoological collection is especially good. It includes a complete series of invertebrate and vertebrate specimens for dissection and also various demonstration specimens. Among these are complete series of sponges, corals, flat worms, round worms, echinoderms, annelids, mollusks, arthropods, insects, and chordates; a set to demonstrate the general survey of the animal kingdom; a series of heart models of different types of vertebrates and human heart; a series of brain models of the most important vertebrate groups; a set of models to demonstrate the various cell types from human tissues; a set of models to demonstrate the principal steps

in somatic mitosis; various other models of invertebrates and vertebrates; zoological dissections in museum jars; skeletal preparations of the most important vertebrate groups; and a complete series of Leuckhart zoological charts.

The histological collection consists of some four hundred mounted microscopical specimens illustrating various forms of invertebrate, vertebrate, and plant tissues, while the botanical collection includes a complete series of both preserved and mounted botanical specimens.

Physics Laboratories

General Laboratory

The Physics Laboratory is equipped to handle both the usual general laboratory and demonstration work as presented in engineering colleges, and also advanced work and research, particularly in electrophysics and light.

A complete workshop for the construction of new or unusual apparatus and for maintenance and repair contains a toolmaker's lathe with full equipment, a power grinder, and a power drill press, in addition to a complete set of tools.

In the elementary laboratory courses separate equipment is provided for each student that he may gain confidence in procedure. Individual tables supplied with gas and electricity are used.

Advanced Physics Laboratory

Equipment for advanced work has been arranged with a view to precision and flexibility. A special switchboard permits single phase or polyphase alternating current of various frequencies, and direct current over wide ranges of voltages to be supplied to the working positions at will. A cathode ray oscilloscope, a precision tilting gold leaf electroscope, a sensitive galvanometer, and the usual meters permit the measurement of electrical constants over a very wide range. For resistance, inductance, and capacity measurement a General Radio bridge is provided, and several small individual bridges. In work on light are used an eleven foot Lummer-Brodhun photometer, several spectroscopes, spectrometers, a spectrophotometer, polarizing equipment, and a Zeiss ECE-330 microscope.

Some of the equipment available is here listed with an indication of the branch of physics in which it is most used, though many of the articles are naturally general in application.

Mechanics

Analytical Balances	Anemometers
Platform Balances	Gyroscope
Barometers	Elasticity Apparatus
Hydrometers	Surface Tension Apparatus
Micrometers (Inch)	Diffusion Apparatus
Micrometers (MM)	Manometer
Vernier Calipers	Hygrometer
Spherometers	Dial Balances
Planimeters	Force Pump
Pyknometers	Hyvac Vacuum Pump
Sets of Weights	Inertia Apparatus
Modulus of Elasticity Apparatus	Center of Gravity Set
Acceleration Apparatus	Lift Pump
Cryophorus	Magdeburg Hemispheres
Centrifugal Force Set	Mercury Well
Cohesion Hemispheres	Pascal's Vases
Value of "g" Apparatus	Reversible Pendulum
Chain Hoist	Spirometer
Lever Demonstration Set	Weight of Air Globe
Gravity Demonstration Set	Wheel and Axle
Viscosity Demonstration Apparatus	Hick's Barograph
Combination of Harmonic Motions Apparatus	Collision Balls Apparatus

Heat

Air Thermometers	Maximum and Minimum Thermometers
Calorimetric Outfits	Conductometer
High Temperature Calorimeter	Crooke's Radiometer
Mechanical Equivalent of Heat Sets	Thermoelectric Couples
Electric Furnace	Pulse Glass
Linear Expansion Apparatus	Pyrometer
Steam Generators	Dew Point Apparatus
Chemical Thermometers	Pascal's Principle Apparatus
Volume Expansion Outfits	Continuous Flow Apparatus
Boyle's Law Apparatus	Emission, Absorption, and Reflection Demonstration Sets

Sound

Kundt's Tube Apparatus	Savart's Toothed Wheels
Resonance Apparatus	Siren Discs
Sonometers	Xylophone
Large Bells	Tuning Forks
Manometric Flame Apparatus	Sound Reflectors
Metronome	Wave Demonstration Apparatus
Organ Pipes	

Light

Optical Benches and Accessories	Color Disc Sets
Prisms	Radiometer
Spectroscopes	Multiple Image Apparatus
Spectrometers	Kolbe-Harcourt Optical Disc Set
Spectrophotometers	Tourmaline Tongs
Photometers	Nicol's Prisms
Refraction Apparatus	Iceland Spar
Microscopes	Polariscopes

Lens Sets
Diffraction Grating
Arc Illuminator
Projection Lanterns
Reflectoscope
Mercury Vapor Light Source
Ultra Violet Light Source

Newton's Rings Apparatus
Spectrum Gas Filled Tubes
X-ray Tubes
Telemicroscope with Stand
Reading Telescope
Polaroids

Electricity

Ammeters
Voltmeters
Milliammeters
Millivoltmeters
Fluxmeter
Magnetometers
Current Transformer
Potential Transformer
Electroscopes
Galvanometers
Voltmeter Multiplier
Cathode Ray Oscilloscope
Impedance Bridge
Slide Wire Bridges
Kelvin Double Bridge
Ayrton Shunts
Signal Generator

Crystal Frequency Standard
Magnets
Static Machine
Vacuum Discharge Tubes
Control for Discharge Tube
X-ray Tubes
Millikan's Oil Drop Equipment
Variable Transformers
High Voltage D.C. Power Supplies
High Frequency Oscillators
Amplifiers
Vacuum Tube Equipment
Condensers
Resistance Boxes
Induction Coils
Magnetos
Electrophorus

Student Activities

NORTHEASTERN University regards student activities as an integral part of its educational program. One of the main departments of the University is charged with the responsibility of co-ordinating the various types of activities and of administering the social, musical, literary, and athletic organizations in such a way as to enable each to contribute in a wholesome, worth-while manner to student life at Northeastern. Every student is encouraged to participate in such activities as may appeal to him, although a standard of scholarship which is incompatible with *excessive* devotion to such pursuits is required of all students.

Members of the faculty also are interested in the informal aspects of the college program. Teaching loads are kept sufficiently low so that the instructional staff may have ample opportunity to mingle with students outside of the classroom in social activities and on the athletic field. In fact some member of the faculty is appointed to serve as adviser for each student activity. His function is not to dictate how the organization shall be run, but to encourage the students in their extra-curricula endeavors and to give them the benefit of his mature point of view in solving the problems that inevitably arise.

One of the outstanding contributions of the co-operative plan in the field of higher education has been its capacity to develop in students those powers of social understanding that are so essential to success in professional life. At Northeastern the program of student activities is made to contribute to this end in a very real way. It is a conscious aim of the student activities advisers to develop among their advisees those qualities of personality and character which will enhance their usefulness as future professional men and citizens. Students have splendid opportunities to develop administrative and executive ability as leaders of undergraduate organizations. No academic credit is awarded for any student activity. This has been no deterrent, however, to student participation in extra-curricula activities for a recent survey of the undergraduate body showed that over 90% of the enrollment were engaged in one or more forms of student activity.

Athletic Association

All students in the Day Division are members of the Northeastern University Athletic Association. Policies of the association are passed upon by a Faculty Committee on Student Activities appointed by the vice-president in charge of the Day Division. This committee decides what students are eligible to

participate in athletics, what the various sports schedules shall be, and what students may be excused from classes to represent the University on athletic trips.

The actual administration of the athletic program is in the hands of a second committee, known as the General Athletic Committee, which consists of the Director of Student Activities, the captains and managers of all varsity teams, and the coaches as ex officio members.

The University maintains both varsity and freshman teams in basketball, baseball, football, hockey, and track. Intercollegiate games and meets are arranged with the leading colleges in the East. In addition to intercollegiate athletics the athletic association conducts an intramural program in various sports.

Tennis Club

The Northeastern University Tennis Club is open to all undergraduates. The Department of Student Activities appoints a faculty adviser who assists the members in conducting an intramural tennis tournament, the final match of which is part of the Field Day program at Riverside. Excellent facilities for tennis are afforded on the courts adjacent to the Main Building of the University. In the early spring members of the Tennis Club have access to the gymnasium for indoor practice.

Mass Meeting

The hour from 12.00 to 1.00 on Wednesdays throughout the year is set aside for mass meetings. Attendance is compulsory. Arrangements are made to bring before the student body some of the ablest and foremost thinkers of the day. A list of speakers for the year will be found on page 15 of this catalogue. When the mass meeting hour is not occupied by a University lecturer, class meetings, concerts, or athletic rallies are held instead. Such gatherings are under the direction of the Department of Student Activities.

"The News"

A college newspaper called the "Northeastern News" is published each week throughout the college year by a staff selected from the student body. The copy is prepared, edited, and published by the students themselves with the counsel of a faculty adviser. Opportunity is afforded for the students to express their opinions on subjects relating to study, co-operative work, social events, or topics of the day. Positions on the News staff and

promotions are attained by competitive work. The paper is in part supported by advertising, both national and local, and in part by a portion of the student activities fee. The Northeastern News is a member of the Eastern Intercollegiate Newspaper Association, and sends one of its editors to the annual convention of this association each year. Copies of the News are mailed to upperclassmen when they are at co-operative work, and to freshmen after the close of their college year.

"The Cauldron"

The senior class publishes annually a college year book, "The Cauldron." It is ready for distribution in the latter part of the second semester and contains a complete review of the college year with class histories, pictures of all seniors, of the faculty, and of undergraduate groups, as well as a miscellany of snapshots and drawings contributed by students.

The Handbook

Each fall the Northeastern Student Union issues a conveniently sized student Handbook which is sold to students at a nominal price. The book contains information about the various college clubs, athletic programs, fraternities, rules governing freshmen, lockers, publications, and so on. The Handbook also includes a diary for the college year in which it is issued.

Student Council

Student government at Northeastern University is vested in the Student Council, composed of elected representatives from the various classes. The Council is the authority on all matters relating to student policies not definitely connected with classroom procedure. It has jurisdiction, subject to faculty approval, over all such matters as customs, privileges, campus regulations, etc. and meets regularly to consider and act upon issues referred to it for decision.

The Senate, the Sigma Society, and the Academy

The Senate of Northeastern University is the Engineering Honorary Society. A similar society, known as Sigma Delta Epsilon, or the Sigma Society, elects its membership from among

outstanding students in the field of business, and a third honorary society, the Academy, draws its members from the College of Liberal Arts. Election to these honorary fraternities is founded primarily upon scholarship, but before a man is privileged to wear the Honorary Society insignia he must display an integrity of character and an interest in the extra-curricula life of the University as well as an acceptable personality. Each Society has a list of members consisting of the outstanding men in the Day Division. Election to an honorary society is the highest honor that can be conferred upon an undergraduate.

Fraternities

There are at present eleven local Greek letter fraternities chartered by Northeastern University. Each fraternity is provided with a faculty adviser who is responsible for the proper administration of the fraternity house under the rules and regulations established by the faculty. The list of fraternities in the order of their establishment is as follows:

- | | |
|-----------------------|---------------------|
| 1. Alpha Kappa Sigma | 6. Phi Beta Alpha |
| 2. Beta Gamma Epsilon | 7. Phi Gamma Pi |
| 3. Eta Tau Nu | 8. Sigma Phi Alpha |
| 4. Nu Epsilon Zeta | 9. Kappa Zeta Phi |
| 5. Sigma Kappa Psi | 10. Gamma Phi Kappa |
| 11. Sigma Delta | |

Elected representatives from each fraternity make up an Inter-Fraternity Council, a body which has preliminary jurisdiction over fraternity regulations. Its rulings are subject to the approval of the Faculty Committee on Student Activities.

Professional Societies and Clubs

To assist in the promotion of social, cultural, and intellectual advancement through informal channels, a number of professional societies and clubs are sponsored. Among others the following organizations of this type are active in the Day Division:

National Engineering Societies

The civil engineering students have a student chapter charter from the Boston Society of Civil Engineers with which organization they are associated as student members with all privileges of the society except that of voting. This student chapter is called the Northeastern University Section of the Boston Society of

Civil Engineers. For several years the parent society has awarded a \$100 scholarship in memory of Desmond Fitzgerald to the outstanding student member of the Northeastern University section.

In a like manner mechanical engineering students have been granted a student chapter of the American Society of Mechanical Engineers, and electrical engineering students enjoy a student chapter of the American Institute of Electrical Engineers.

In 1925 under charter granted by the Northeastern Section of the American Chemical Society a student chapter was established. Its membership is open to second, third, fourth and fifth year students of the Chemical Engineering Course who have been approved by the membership committee. Meetings are held frequently, and the members are further privileged to attend meetings of the Northeastern Section. Representatives of the Northeastern Chapter frequently go on the field trips conducted by the section.

The Society of Industrial Engineers, the newest national engineering society, has also established a student branch at Northeastern.

Affiliated Engineering Societies of New England

Membership in the student sections of the Boston Society of Civil Engineers, the American Society of Mechanical Engineers, or the American Institute of Electrical Engineers also includes membership and privileges of the Affiliated Engineering Societies of New England. This organization is an affiliation of all the major technical societies of Boston and vicinity and provides very valuable lectures, smokers, and informal meetings with the outstanding men engaged in engineering work in Boston and vicinity.

International Relations Club

The International Relations Club was founded in 1932 for the purpose of studying and discussing those national and international events and issues which are daily transpiring within and without our borders and which vitally concern our American life and institutions.

It is the intention of the club to deal with all questions in an impartial and broadminded manner, and to take an intelligent and effective part in promoting international understanding and harmony. The club maintains contacts with similar organizations in other colleges.

Membership is not open to freshmen, and only to those upper-classmen who maintain good scholarship.

Banking Club

The purpose of this organization is to increase among its members the knowledge of the theory and practice of banking. Any student of Northeastern University, while enrolled in any of the banking courses of the Day Division, is eligible to active membership in this club. Meetings are held each ten week period at which banking executives from Greater Boston are invited to discuss current issues in the field of banking.

High School and State Clubs

Students from high schools and preparatory schools that have a large representation in Northeastern have organized High School and State Clubs. These clubs offer an opportunity for old friends to get together, talk over home town and state affairs, and plan various social activities. Among the present active organizations of this type are the Mechanic Arts Club, the Greater Lawrence Club, the Haverhill Club, the North Shore Club, the Brockton Club, the Salem Club, the Newton Club, the Lowell Club, the Mainiacs, the Twin State Club, the Nutmeg State Club, and the Empire State Club.

Representatives from the various High School and State Clubs have formed an Inter-Club Council for the advancement of their joint interests.

Radio Club

One of the most popular undergraduate activities is the Northeastern University Radio Club. Members are provided opportunity for code practice and are encouraged to obtain their amateur licenses. The Club owns and operates station W1KBN, a short wave transmitter, located in the Advanced Physics Laboratory. Meetings are held about once a month for the discussion of technical matters. Practicing radio engineers are frequently invited to address the Club at evening meetings when students in both divisions may attend.

Rifle Club

Organized a number of years ago, the Rifle Club was so successful that in 1933 riflery was recognized as a minor sport. Members of the club are given instruction in the art of rifle shooting and those students who excel in intra-mural competition are selected for the team representing the University in intercollegiate contests. Practice sessions are held twice a week in the University rifle range. Membership is open to all students.

Musical Clubs

The Department of Student Activities sponsors the following musical clubs: an orchestra, a band, a glee club, a banjo club, and a dance orchestra, for which all students with musical ability are eligible. Membership in the various musical clubs is attained by competitive effort.

Each organization has a faculty adviser and each elects a representative to the Musical Clubs Council. The purpose of this council is to co-ordinate the various musical activities of the Day Division. At the annual Musical Clubs Banquet, held early in the spring, charms are awarded to the leaders and managers of the several clubs and to members who have played over a period of three full years.

The various musical clubs, in conjunction with the Dramatic Club, combine in an annual mid-winter entertainment and participate in occasional outside public engagements throughout the college year.

Class Organization and Activity

Each of the classes in the Day Division elects its officers and carries on activities as a class. Freshmen are required to wear the red and black necktie distributed through the Department of Student Activities in order that they may be readily distinguishable to each other and to upperclassmen.

One of the outstanding social events of the year is the Junior Promenade. Field Day, held at Riverside in early June each year, is also under the auspices of a committee of students representing the various classes. Field Day provides an opportunity for students, their friends, and alumni to get together in a delightful environment along the banks of the Charles River for a day of water sports, games, and dancing.

The Northeastern Student Union

The purpose of the Northeastern Student Union is to carry out the work of a Christian Association within the University. It endeavors to deepen the spiritual lives of Northeastern men through the building of Christian character, to create and promote a strong and effective Northeastern University spirit in and through a unified student body, to promote sociability, and to emphasize certain ethical, social, civic, intellectual, economic, physical, vocational, and avocational values.

All students are encouraged to participate in the activities of the Union, no matter what their religious faith, as the work of the Union is entirely non-sectarian. A good moral character is the only requirement for eligibility to membership. It is hoped that as many students as can will participate in this ideal extra curricula work.

The Union conducts a weekly Chapel Service to which all Faculty members and students are invited. The service, which is non-sectarian and voluntary, is held on Thursday mornings from 8.40 to 8.55 o'clock. Many eminent preachers of Greater Boston are engaged to deliver brief addresses.

Alumni Association

The alumni of the Day Division are organized to promote the welfare of Northeastern University, to establish a mutually beneficial relationship between the University and its alumni, and to perpetuate the spirit of fellowship among members of the Alumni Association.

Among the events sponsored by the Alumni Association are the annual meeting and reunion; the annual alumni-varsity basketball game; class reunions — usually held the night before Field Day; and certain features of the Field Day program. The Association also awards a track trophy each year and contributes to the Alumni Student Loan Fund.

The work of the General Alumni Association is supplemented by the activities of regional alumni clubs. The local clubs meet periodically in their respective centers to discuss matters pertaining to the University and its alumni. Meetings are also held in conjunction with the visits of Northeastern's athletic teams to the various club centers.

*Officers of the General Alumni Association
of the Day Division*

President

HENRY C. JONES, JR

Vice-President

LINDSAY ELLMS

Secretary

RUDOLF O. OBERG

Treasurer

WILLIS P. BURBANK

Executive Committee

CRAWFORD A. GLEN
JOHN W. GREENLEAF
GEORGE A. MALLION

MAX P. STANDKE
RAYMON D. TELLIER
EARL H. THOMSON

Faculty Representative

G. RAYMOND FENNELL

Admission Requirements and Freshman Programs

Applicants for admission to the freshman class without restrictions must qualify by *one* of the following methods:

1. Graduation from an approved course of study in an accredited secondary school, including prescribed subjects listed below.

2. Completion of fifteen acceptable secondary school units with a degree of proficiency satisfactory to the Department of Admissions.

3. Examinations.

(Certificate of entrance examinations passed for admission to recognized colleges and technical schools may be accepted.)

Prescribed Subjects for Admission

College of Liberal Arts

The College of Liberal Arts offers courses leading either to the A.B. or to the S.B. degree. According to the degree which he expects to receive, the student will present for admission one or the other of the groups of prescribed subjects listed below.

<i>A.B. Curriculum</i>		<i>S.B. Curriculum</i>	
	Units		Units
English	3	English	3
Foreign Language (Ancient or Modern)	3	†Mathematics	2 or 3
Social Studies	2	Natural Science	1
*Electives	7	*Electives	8 or 9
Total	15	Total	15

College of Business Administration

Mathematics	1 unit
Natural Science	1 unit
History and/or Social Studies	3 units
English	3 units
*Electives	7 units
Total	15 units

College of Engineering

Mathematics	3 units
**Physics or Chemistry	1 unit
History and/or Social Studies	2 units
English	3 units
*Electives	6 units
Total	15 units

*Not less than four of the "electives" must be in one or more of the following academic branches: Languages, Natural Science, Mathematics, Social Sciences, History.

**Physics is recommended.

†Students expecting to major in chemistry, mathematics, or physics must offer 3 units.

A unit is a credit given to an acceptable secondary school course which meets at least four times a week for periods of not less than forty minutes each throughout the school year.

Entrance examinations are not required of students whose transcripts of record are acceptable, but the Committee on Admission reserves the right to require a candidate to present himself for examination in any subjects that it may deem necessary because of some weakness in his secondary school record.

Other Requirements

These formal requirements are necessary and desirable in that they tend to provide all entering students with a common ground upon which the first year of the college curriculum can be based. But academic credits alone are not an adequate indication of a student's ability to profit by a college education. Consequently the Department of Admissions takes into consideration, along with the formal requirements stated above, many other factors regarding candidates for the freshman class. A student's interests and aptitudes in so far as they can be determined, his capacity for hard work, his attitude toward his classmates and teachers in high school, his physical stamina, and most important of all — his character, all these considerations are carefully weighed. In this way the University seeks to select for its student body those who not only meet the academic admission requirements but who also give promise of acquitting themselves creditably in the rigorous program of training afforded by the co-operative plan and of later becoming useful members of society.

Personal Interview

Candidates for admission should communicate with the Director of Admissions, who will advise them frankly on the basis of past experience. A personal interview is always preferred to correspondence, and parents are urged to accompany their sons whenever this is possible. Effective guidance depends in large measure upon a complete knowledge of a candidate's background and problems. Parents invariably are able to contribute much information that aids the admissions officer in arriving at a decision. In general, a student is likely to be more successful in his college work if he does not enroll under the age of seventeen.

Application for Admission

Each applicant for admission is required to fill out an application blank whereon he states his previous education, as well as the names of persons to whom reference may be made in regard to his character and previous training.

An application fee of five dollars (\$5) is required when the application is filed. This fee is non-returnable.

The last page of this catalog is in the form of an application blank. It should be filled out in ink and forwarded with the required five dollar fee to Director of Admissions, Northeastern University, Boston, Mass. Checks should be made out to Northeastern University.

Candidates are urged to visit the office of Admissions for personal interview if it is possible for them to do so before submitting their applications. Office hours of the Department are from 9.00 A.M. to 4.00 P.M. daily; Saturdays to 12.00 N. The Director of Admissions will interview applicants on Wednesday evenings but by appointment only.

Upon receipt of the application, properly filled out, the College at once looks up the applicant's references and secondary school records. When replies have been received to the various inquiries, the applicant is informed as to his eligibility for admission.

Applications should be filed not later than May first, thus allowing ample time for the investigation of the applicant's secondary school records before he enrolls in the College.

The University reserves the right to place any entering student upon a period of trial. Whether he shall be removed from trial at the end of this time or requested to withdraw will be determined by the character of the work he has accomplished and his conduct during this trial period.

Registration

Eligibility for admission does not constitute registration. Freshmen register at the University on September 8, 1938. No student is considered to have met the requirements for admission until he has successfully passed the required physical examination.

Advanced Standing

Students transferring from approved colleges will be admitted to advanced standing provided their records warrant it. Whenever a student enters with advanced standing and later proves to have inadequate preparation in any of his prerequisite subjects, the Faculty reserves the right to require the student to make up such deficiencies.

Applicants seeking advanced standing should arrange to have transcripts of their previous college records forwarded with their initial inquiry.

Entrance Condition Examinations in Boston

Students who are deficient in required units for admission may remove these deficiencies by examination. Such examinations are held at the University unless special arrangements are made with the Department of Admissions to administer them elsewhere.

Students are advised to take such examinations on the earliest possible date in order that any deficiencies which they fail to clear may be made up in time to permit registration with the desired class and division.

The time of examinations is as follows:

10.00 A.M. to 12.00 N

1.00 P.M. to 3.00 P.M.

During the current year examinations will be given on the following days: June 8, 1938; August 31, 1938. All other examinations will be given by special assignment.

Freshman Orientation Period

In order that freshmen may be ready to pursue their academic work with greater composure and be somewhat acclimated preceding the beginning of scholastic work, three or four days prior to the first term are devoted to a freshman orientation period. During this time freshmen are advised as to choice of program, and assisted in every way possible in order that they may be prepared to begin serious study and work on the first day of the college term. All freshmen are required to attend all exercises at the University scheduled during the orientation period.

An optional feature of the orientation program is the freshman camp conducted under the auspices of the Student Union. The camp was instituted in the fall of 1933 particularly for out-of-town students, although commuters are welcomed. It aims at providing a stimulating and wholesome environment under vacation conditions in which the new men may become acquainted with one another and with members of the faculty. The camp site on Lake Massapoag in the northern part of Massachusetts is admirably equipped for this purpose, having ample facilities for baseball, basketball, boating, and swimming. The cost of the two days at camp is nominal and most freshmen avail themselves of this opportunity for recreation prior to the beginning of the college year.

Physical Examination

All freshmen receive a thorough physical examination at the University during the orientation period. All students are expected to report promptly at the appointed time for examination. Those who fail to appear at the appointed time will be charged a special examination fee of two dollars (\$2).

Freshman Advisers

At the time of his matriculation each freshman is assigned to a personal adviser, a member of the faculty, who serves as an interested and friendly counselor during the perplexing period of transition from school to college. A personal record card is prepared for each student, containing certain pertinent data from his preparatory school record, the report of his physical examination at Northeastern, his scores on psychological tests, the results of placement examinations, and any special notes which may be of significance in advisory work. The aim of the freshman advisory system is primarily to assist students in making an effective start upon their programs and secondarily to acquire for the later use of guidance officers a fund of significant information relative to every freshman. Advisory work is under the direction of a Dean of Students, assisted by a clinical psychologist, who handles the diagnosis and remedial treatment of problem cases.

Individual Attention to Freshmen

Not only is attention given to the problems of the student in connection with his studies, but the service is extended to include advice upon any problem in which advice is needed and desired, the aim being to guide the student to the fullest possible personal development.

The college record of each student is carefully analyzed in the light of what could reasonably be expected of him, considering his previous school record, his score on the psychological test, and the other factors in his case. If he is not doing his best work, an investigation is made to determine and eliminate the causes. If he is doing as well as could be expected or better, he is encouraged to continue to do so. In other words, each student is held to the most effective work possible, through advice, encouragement, and assistance.

Outline of Freshman Courses

The first year is a period of full time study during which the student must demonstrate his fitness for the program which he has elected. Students who are unsuccessful in the basic courses of the freshman year will not be permitted to continue with their advanced program, but will be advised to change their goal and type of training. In some instances this will mean change to another curriculum at Northeastern; in others, transfer to another institution. *The freshman courses are so arranged as to permit change of objective at the end of the first year with a minimum loss of time.*

Freshman Programs

1. For Liberal Arts students majoring in English, Economics, and Sociology.

No.	Course	S.H.	No	Course	S.H.
H 1	History of Civilization	3	H 2	History of Civilization	3
S 1-A	Intro to Social Sci. . . .	4	S 2-A	Intro. to Social Sci. . . .	3
P 1-A	Survey of Physical Sci. . .	4	P 2-A	Survey of Physical Sci. . .	4
E 1	English I.	3	E 2	English I.	3
G 1 or F 3	German or French. . . .	3	G 2 or F 4	German or French. . . .	3
Ps 1-A	Orientation.	-	PE 2	Hygiene.	1
PE 3-4	Physical Training.	-	PE 3-4	Physical Training.	-
		17			17

2. For Liberal Arts students majoring in Chemistry, Mathematics, and Physics.

M 1,M 3	Algebra, Trigonometry	5	M 4	Analytic Geometry. . .	5
P 1	Physics I.	3	P 2	Physics I.	3
CH 1	General Chemistry. . . .	4	CH 2	Inorganic Chemistry. . .	3
E 1	English I.	3	E 2	English I.	3
G 1 or F 3	German or French. . . .	3	G 2 or F 4	German or French. . . .	3
Ps 1-A	Orientation.	-	PE 2	Hygiene.	1
PE 3-4	Physical Training.	-	PE 3-4	Physical Training.	-
		18			18

3. For Business Administration students.

H 1	History of Civilization	3	H 2	History of Civilization	3
Ec 1	Intro. to Economics. . .	3	Ec. 2	Ec. Hist. of the U. S. . .	3
M 21	Business Mathematics. .	3	M 22	Business Mathematics	2
Gv. 1-A	American Government	3	Gv 2-A	American Government	3
AC 1.	Accounting I.	3	AC 2	Accounting I.	3
E 1	English I.	3	E 2	English I.	3
Ps 1-A	Orientation.	-	PE 2	Hygiene.	1
PE 3-4	Physical Training.	-	PE 3-4	Physical Training.	-
		18			18

4. For Engineering students.

M 1, M3	Algebra, Trigonometry	5	M 4	Analytic Geometry. . .	5
P 1	Physics I.	3	P 2	Physics I.	3
CH 1	General Chemistry. . . .	4	CH 2	Inorganic Chemistry. . .	3
E 1	English I.	3	E 2	English I.	3
D 1	Graphics I.	3	D 2	Graphics II.	3
Ps 1-A	Orientation.	-	PE 2	Hygiene.	1
PE 3-4	Physical Training.	-	PE 3-4	Physical Training.	-
		18			18

THE COLLEGE OF LIBERAL ARTS

Aims and Methods

THE Northeastern College of Liberal Arts aims to instruct men in the art of living and to lay down a systematic foundation of knowledge upon which, as graduates, they may continue with more specialized training, either by formal graduate study or by independent learning and experience.

Liberal as this program is, however, it develops for the student genuinely practical values. The student is encouraged from the beginning of his freshman year to consider the problem of his future vocation, to select courses having the most useful bearing on his intended life-work, and to take advantage of opportunities for practical experience in his chosen field.

Through the Northeastern plan of co-operative education for upperclassmen, the student makes early contact with actual working conditions and profits by the wholesome experience of earning at least part of the money to defray his own college expenses. Viewed as a whole, then, his college years surround him not with an artificial atmosphere of cloistered scholarship but with an environment very close to that which he will enter after graduation. Having completed his course, if he has made good use of his opportunities, he will be mentally capable and, what is no less important, readily employable.

The Elective System

So that each student may plan a college program to suit his own interests and aptitudes and to prepare him for the work he intends to take up after graduation, a wide range of elective courses is offered. This does not mean that students are free to select courses indiscriminately. A definite series of basic courses in each program of instruction is required by the faculty, in order that every student may be insured a proper foundation in his major field. These required courses are largely concentrated in the first two years of the curriculum.

Throughout the college course the problem of the student's vocational future is emphasized by the adviser. Together the adviser and student consider possible careers open to the student. If the latter expects to pursue graduate or professional studies, he is guided in a choice of courses which will best prepare him for his advanced work. If the student must begin to earn his livelihood immediately after graduation, the various fields open to him are carefully considered in the light of his ability and inclination.

Students who plan to enter professional schools are urged to familiarize themselves with the requirements for admission to the particular schools in which they are interested.

Students intending to enter the professions of journalism or law are advised to major in English or economics and to take courses in history and government. Those who wish to become teachers should major in the field in which they want to teach and take a minor in education. Those who expect to attend a graduate school of business administration should acquire a broad training in liberal courses. They should major in economics and elect courses in English, government, and history. Students interested in becoming social workers should major in sociology.

Those students who wish to enter business directly after graduation from the College of Liberal Arts may take courses offered in the Northeastern University College of Business Administration for which they have the necessary prerequisites, provided they fulfill all the curricular requirements of the College of Liberal Arts in regard to freshman courses, language courses, and major and minor fields.

Requirements for Graduation

The following requirements must be fulfilled by all candidates for the A.B. or S. B. degree:

1. To be graduated, a student must have completed a total of not less than 125 semester hours of academic work with a degree of proficiency acceptable to the faculty. (One semester hour comprises three clock hours of work per week over a period of from fifteen to eighteen weeks.) Usually this represents one hour of recitation or lecture and two hours of outside preparation. In drawing, laboratory, or field work, however, a larger part of the time is given to class work.

College attendance over a five-year period is normally needed to fulfill this requirement, although the work may be completed in four years by students who elect full time study instead of the co-operative plan for one or more upperclass years. Students who undertake co-operative work assignments must also meet the requirements of the Department of Co-operative Work before they become eligible for their degrees.

No student transferring from another college or university is eligible to receive the A.B. or the S.B. degree until he has completed at least one academic year at Northeastern immediately preceding his graduation.

2. At least 30 semester hours must be completed in a major field of concentration.
3. From 12 to 16 semester hours must be completed in each of two other fields which are called the minor fields.
4. All candidates for the A.B. degree must offer at least three units of foreign language for admission and complete at least two full year courses in foreign language in their college programs.
5. All candidates for the S.B. degree must complete at least two full year courses in foreign language in their college programs.
6. Candidates who have achieved distinctly superior attainment in their academic work will be graduated with honor. Upon special vote of the faculty a limited number of this group may be graduated with high honor. Students must have been in attendance at the University at least two years before they may become eligible for graduation with honor or with high honor.

Curricula in Liberal Arts

The following fields of study are approved as fields of concentration, or major fields, in the College of Liberal Arts: English (with an option in journalism), economics, sociology, mathematics, physics, and chemistry.

Students may elect their minor fields of study after consultation with their faculty advisers. The following subjects are available as minors: biology, education, French, German, history and government, graphic arts, physical education, and psychology. Any of the major fields listed above may also be chosen as minors. Students in the College of Liberal Arts may also elect a limited number of courses from among those offered in other colleges of the Day Division such as advertising, contracts, marketing, accounting, and similar subjects. For a complete statement of admission requirements and freshman programs see pages 66 to 71 of this catalog.

Pre-legal Curricula

Effective September 1, 1938, by a ruling of the Supreme Judicial Court of Massachusetts, in order to be eligible for examination for admission to the Bar an applicant must have completed certain general educational requirements before beginning his legal

education. Briefly, this general education must comprise graduation from a four-year high school and the completion of not less than half of the work accepted for the Bachelor's degree in a college approved by the Board of Bar Examiners.

Two separate programs of pre-legal study, both of which meet one-half of the semester hour requirements for the Bachelor's degree, are offered by the College of Liberal Arts.

One of these curricula is designed for young men who are able to give their full time to college life for the two-year period necessary to complete the pre-legal requirements. It comprises one year of thirty-five weeks and a second year of thirty weeks and is specifically adapted to the needs of full-time students. The academic work is articulated directly with that of the secondary schools from which these young men have recently been graduated. It is paralleled by a wholesome program of athletics and social activities which contribute much to the development of young college men.

The other pre-legal curriculum is built around the needs of mature employed men and women who can give only part time to college work. While this evening course of study meets the same academic standards and includes the same number of semester hour credits as that offered in the day, less emphasis is given to student activities and the courses of instruction are chosen to meet the needs of adult students. Class attendance three nights a week, forty weeks each year, for three years is needed to cover the curriculum requirements.

Both day and evening curricula lay much emphasis upon the social sciences, English, and history, because of the value of thorough grounding in these fields for the prospective student of law.

MAJOR FIELDS

On the pages which follow are given the synopses of courses offered in the several curricula of the College. Courses offered in the first semester bear odd numbers, and those offered in the second semester bear even numbers.

The term pre-requisite indicates a course that must be passed by a student before he will be permitted to register for an advanced course.

Freshman courses extend over a full semester of 18 weeks. Upperclass courses are uniformly 10 weeks in length each term.

The University reserves the right to withdraw any course in which there is insufficient enrolment.

Chemistry

CH 1 *General Chemistry*

An introductory course not requiring previous knowledge of the subject, and giving a survey of the entire chemical field with some consideration of its background. The fundamental principles of the science are adequately taught through the use of the problem technique, all problems being based on practical applications. Visual aids such as lecture demonstrations, lantern slides, and moving pictures contribute to a better understanding of the subject matter and its applications to industrial problems.

Two lectures, a recitation, and a laboratory period constitute the weekly plan of instruction.

4 semester hour credits

CH 2 *Inorganic Chemistry*

This course undertakes a more thorough treatment of the modern developments of inorganic chemistry. Such topics as concentration, mass-action law, dissociation, chemical and ionic equilibria, common ion effect, Ph value and hydrogen ion concentration are studied in considerable detail. Attention is also given to the recent ideas of the atomic structure.

The course is profusely illustrated by chemical calculations based on practical applications.

3 semester hour credits

CH 9 *Qualitative Analysis*

The object of this course is to give the student knowledge of the various fundamental qualitative laws and principles. A portion of the time is devoted to the formulation of numerical terms which are essential to understanding mass law action, chemical equilibrium, ionic equilibria, solubility product, hydrolysis, and oxidation and reduction constants.

It not only furnishes a definite and exact working basis but leads, ultimately, to independent and original thinking, thus preparing the way to more difficult problems. Little real intelligent progress can be made unless these theories are understood, properly appreciated, and correctly applied.

The lectures are supplemented by recitations and quizzes and outside assignments devoted to the solution of problems.

2 semester hour credits

CH 10 *Qualitative Analysis*

The essential features of the course are a system of lectures, recitations, and quizzes carefully co-ordinated with laboratory work. The object is to train the student in exact methods, with an attempt to make clear the reason for each operation and the ability to apply them to the laws of chemical equilibrium, especially the principles relating to solubility, ionization, complex ion formation, and oxidation and reduction of substances in solution.

Special attention is given to methods that will provide for a reliable detection of a small quantity of any constituent in the presence of a large quantity of any other constituent.

A part of the course is a method of systematic analysis of getting substances into solution by solvent and fusion treatments.

The importance of exact method of qualitative detection can not be over estimated. It supplies the fundamental data upon which industrial operations may be successfully carried out.

2 semester hour credits

CH 11 *Qualitative Analysis Laboratory*

The object of the laboratory exercises is to cultivate scientific attitude and habit of thought, and to increase power of acquiring knowledge. The work permits the student accurately to observe and study the phenomena concerned with certain chemical changes of fundamental importance and to connect these observations with the theoretical discussions held in the lecture and recitation classes in inorganic chemistry.

Careful manipulations, thoroughness in observation, and accuracy in arriving at conclusions are required of each student. Neat and satisfactory notes will be considered an essential part of the work.

Pre-requisite: CH 2

1 semester hour credit

CH 12 *Qualitative Analysis Laboratory*

The experiments in this course, illustrating the solubilities of various compounds, are so selected and logically arranged that they may later be combined to form a complete system of analysis.

In connection with each experiment, care is taken that the student understands the reactions and theory involved. The latest developments in qualitative tests are used frequently. From time to time unknown solutions and substances are given to the student for analysis to emphasize the practical aspects of the work.

This course also includes the reactions and separations of the anions, methods of solution, and actual qualitative analyses of various industrial products and naturally occurring materials.

1 semester hour credit

CH 15 *Quantitative Analysis*

It is the purpose of this course to give to the student a realization of the scientific development of quantitative methods. Each of the major operations such as weighing, measurement of volumes, titration, filtration, ignition, and combustion, is considered from the standpoint of the theoretical principles involved, and with due consideration of the manipulative technique necessary.

This is followed by the combination of these operations and their application to actual analysis including a comprehensive study of volumetric methods and of the more elementary parts of gravimetric analysis.

As the correct calculation of analytical results is of no less importance than the actual procedures of analysis, a number of problems form a very important part of the course.

Pre-requisite: CH 3

1 semester hour credit

CH 16 *Quantitative Analysis*

This course, a continuation of CH 15, is similarly conducted. After consideration of the more advanced parts of gravimetric analysis and of systematic mineral procedures, the remainder of the course consists of a critical discussion of common technical methods, including the standard ones for the analysis of steel, non-ferrous alloys, fuels, oils, gas, water, fertilizers, foods, etc.

Pre-requisite: CH 15

2 semester hour credits

CH 17 *Quantitative Analysis Laboratory*

This is a laboratory course intended to illustrate by actual use the various analytical methods considered in CH 15. After certain preliminary experiments designed to acquaint the student with the apparatus used; volumetric analysis, including acidimetry and alkalimetry, oxidation, reduction, and precipitation methods are taken up. This is followed by simple gravimetric analysis.

2 semester hour credits

CH 18 *Quantitative Analysis Laboratory*

This course includes not only the usual illustrative gravimetric determinations, but also electrolytic, electrometric, combustion, and optical methods.

In the latter half of the course actual industrial methods are used so that at its completion the students should be able to perform satisfactorily any ordinary analysis.

2 semester hour credits

CH 25 *Industrial Chemistry*

The more important industrial processes are studied with a view to the general chemistry involved and to the various types of apparatus necessary to carry out the chemical reactions. The student is given a broad survey of the field of chemical industry and a knowledge of the relationships of the different industries to one another. The salt and heavy acid industries are studied intensively and the uses of their products in other industries are carefully considered. Special attention is given to the economics of the chemical industry. Lectures, assigned readings, and reports presented by individual students upon assigned topics are included in the course.

Pre-requisite: CH 2

1 semester hour credit

CH 26 *Industrial Chemistry*

This course is a continuation of CH 25 and covers the alkali and miscellaneous inorganic industries.

Pre-requisite: CH 25

1 semester hour credit

CH 31 *Organic Chemistry I*

This course includes a study of the recognized basic principles of the aliphatic organic compounds. An attempt is made to present the material from a connected and understandable viewpoint by a study of the close relationship which exists between the various classes of compounds. Considerable emphasis is placed on genetic charts and synthesis of typical classes of compounds, by which the class being studied is related to classes studied previously.

Some of the more important compounds are studied in detail. The industrial applications of many of the theoretical principles of the subject are considered in order to acquaint the student with the practical nature of organic chemistry.

2 semester hour credits

CH 32 Organic Chemistry II

This course is a continuation of CH 31, but deals with the preparation and characteristic reactions of the aromatic organic compounds. Special attention is given to polymerization, diazotization, dyes, and the use of catalyst, nitration, and sulfonation.

A few of the more important heterocyclic compounds are studied

2 semester hour credits

CH 33 Organic Chemistry Laboratory I

This course consists of a selected number of preparations and includes the more important manipulations designed to teach the student the laboratory technique involved in organic chemical work such as fractional distillation, steam distillation, extraction, etc.

These preparations familiarize the student with the general types of chemical changes such as esterification, halogenation, nitration, reduction, diazotization, and saponification.

One of the important features of the course is to teach the student a definite method of keeping notes of his laboratory work, all detailed reactions, calculations, and also the answers to a set of questions on each experiment performed.

1 semester hour credit

CH 34 Organic Chemistry Laboratory II

This course is a continuation of CH 33. The preparations in this course serve to acquaint the student with such types of chemical reactions as sulfonation, the Grignard reaction, the Perkins reaction, Skraup's synthesis, the Friedel-Crafts' reaction, and the preparation of dyes.

In addition to the manipulative techniques taught in CH 33, this course introduces the use of vacuum distillations, fractional crystallization, and separations by physical and chemical means.

Laboratory notes and answers to questions are recorded as in CH 33.

1 semester hour credit

CH 35 Industrial Organic Chemistry

An attempt is made to present in a systematic manner the principles and practice of the more important and well defined reactions in organic synthesis.

Attention is directed not only to the chemistry and products of reaction but equally to the contributing factors which lead to efficient operation. The course includes an examination of the

reactants, an inquiry into the mechanism of the reaction, a knowledge of the chemical and physical factors involved, observations regarding the design and construction of equipment, and, finally, a study of typical technical applications.

2 semester hour credits

CH 36 Industrial Organic Chemistry

This course is a continuation of CH 35. An attempt is made to co-ordinate the study of fundamental principles of organic synthesis with the requirements of industrial plants.

The latter part of the course is devoted to a study of the synthesis of the terpenes and their genetic relationships.

2 semester hour credits

CH 37 Organic Chemistry Laboratory III

The purpose of this course is to familiarize the student with the chemical and physical tests used in qualitative organic analysis. A series of experiments, based on the classification of reactions of organic compounds, serves as a basis for the examination of simple liquid and simple solid compounds and the preparation of suitable derivatives of them.

This system makes possible the collection of sufficient data on each problem for a comprehensive written report. The student is placed on his own responsibility and is requested to use and acquaint himself with the chemical literature and standard reference books available on this subject in libraries.

1½ semester hour credits

CH 38 Organic Chemistry Laboratory IV

This course is a continuation of CH 37 but is much broader in scope. It includes the examination of liquid and solid mixtures of two and three components each. This is followed by the analysis of one or more industrial organic compounds, depending on the time available.

A systematic procedure is employed in the separation, identification, and preparation of the derivatives of the mixtures. Library work and written reports are an essential part of this course.

1½ semester hour credits

CH 41 Library Research Problems

This course is intended to acquaint the chemical student with the constantly increasing volume of scientific literature pertaining to the field of chemistry. While intended primarily as preparatory to thesis work, it furnishes also a very valuable tool for use in later industrial and scientific work.

After a brief outline of the entire field of scientific literature and a description of various methods of library procedure, the various available sources of scientific information are investigated. Original sources such as scientific journals, government publications, patents and manufacturers' catalogs are first considered. A survey of secondary sources follows, including a study of abstracting journals, reviews, bibliographies, handbooks, standard reference books, encyclopedias, etc. A series of individual library problems, in which the student is required to apply the information obtained in the classroom, forms a very important part of the course.

1 semester hour credit

CH 43 *Physical Chemistry I*

This course begins with a short resume of the field of physical chemistry, and its relationship to the other courses in chemistry and chemical engineering. Following this, atomic and molecular weights, and the properties of gases, liquids, solids, ionized, non-ionized, and colloidal solutions are taken up. Throughout this course, as well as in Physical Chemistry CH 44, quantitative methods are emphasized and the solving of a number of illustrative problems is required.

2 semester hour credits

CH 44 *Physical Chemistry II*

This course, which is similar in character to Physical Chemistry CH 43, includes a consideration of the following topics: rates of reaction, homogeneous and heterogeneous equilibrium, and thermo-chemistry. From time to time industrial and technical applications are considered from the standpoint of physical chemistry, but in such a way as not to lose sight of the broad field of the subject.

2 semester hour credits

CH 45 *Physical Chemistry III*

This course, which is similar in character to the preceding ones, considers such portions of the fields of electrochemistry and thermodynamics as are of value to chemical engineers. The laboratory work which accompanies this and the succeeding course is designed not only to illustrate the work of the classroom but also serves to review that of the previous courses.

2 semester hour credits

CH 46 *Physical Chemistry IV*

In this course which is of a different nature from those which precede it, the subjects of photochemistry, radioactivity, periodic classification and electrical theory of matter are taken up and as much of the elements of the quantum theory as the time available will allow.

2 semester hour credits

CH 47 *History of Chemistry*

This course deals with the development of chemistry from the earliest times to about the nineteenth century. The important theories of chemistry and the personalities of the great men who have contributed to that development are covered in the lectures and assigned readings.

It is required that students electing chemistry as their field of concentration elect this course.

Pre-requisite: CH 2

1 semester hour credit

CH 48 *History of Chemistry*

In this course a study is made of the outstanding chemists and accomplishments in chemistry covering the period from about the beginning of the nineteenth century up to the present time.

This course is not dependent on CH 47 and can be treated as a separate unit.

Pre-requisite: CH 2

1 semester hour credit

Economics

Ec 1 Introduction to Economics

In order to provide an adequate background for the study of economics this first course emphasizes the economic resources of our country and the part played by these resources in the development of our modern industrial society.

The course is more concerned with promoting the comprehension of basic concepts than with stressing encyclopedic knowledge of masses of details. In the latter part of the semester frequent use is made of motion pictures to illustrate the processes and peculiar economic characteristics of specific industries.

3 semester hour credits

Ec 2 Economic History of the U. S.

This course is designed to complete the factual background which is needed for the most successful study of theoretical economics. The economic development of the United States is traced from the colonial period to the present with special emphasis upon the period since the Civil War. Stress is laid upon the importance of economic factors and changes in our history in the description of the development of manufacturing, agriculture, domestic and foreign commerce, finance and banking, transportation, and labor organizations. Consideration is given to European developments which have been closely related to those of the United States.

3 semester hour credits

Ec 3 Economic Principles

A thorough grounding in the fundamental principles and laws of economics is the aim of this basic course. The main topics include: the nature and organization of production, the nature and importance of wants, the relation of money and prices, the process of exchange, and the nature of international trade.

2 semester hour credits

Ec 4 Economic Principles

A continuation of Ec 3. A careful analysis is made of the determination of price under conditions of competition and monopoly, and of the distribution of wealth and income in the form of wages, economic rent, interest, and profits. The elements of insurance are discussed in connection with profits.

2 semester hour credits

Ec 5 Economic Problems

In this course the application of economic principles to some of the major economic problems of modern society is emphasized. The problems studied include: consumption, protective tariffs and subsidies, labor problems such as unemployment and labor unions, and the business cycle.

2 semester hour credits

Ec 6 Economic Problems

A continuation of Ec 5. Among the problems considered are the following: price stabilization, the agricultural problem, the relation of government to business including the control of monopolies and public utilities, insurance, public finance, and proposals for the remodeling and improving of the economic system.

2 semester hour credits

Ec 7 Money and Banking

This course provides a detailed analysis of the functions of money and credit in our economic system. Consideration is given to the nature of money, monetary standards with special reference to the gold standard, the theory of bank credit, the structure of our banking system, and the organization of the American money market.

2 semester hour credits

Ec 8 Money and Banking

A continuation of Ec 7. This course is devoted to such problems as the quantity theory of money, the control of money and credit by the central bank, the policies of the Federal Reserve Board, and the international aspects of the control of money and credit. Throughout the course especial attention is paid to current development in money and banking.

2 semester hour credits

Ec 11 Labor Problems

An intensive study of the labor problems of modern industry constitutes the content of this course. Unemployment and other grievances of the worker, including industrial accident and disease, inadequate wages, long hours, undesirable working conditions, child and woman labor, etc., are carefully analyzed. Labor unions, representing the workers' effort to solve the above problems, receive extended attention with an appraisal of their policies and accomplishments. Employee representation, profit-sharing plans and similar devices of the employer to meet the same problems are also examined critically. Other topics of the course include the efforts of the state to prevent and settle industrial disputes; labor legislation; labor and politics; social insurance; and socialism and co-operation in connection with the solution of labor problems.

Pre-requisite: Ec 3, Ec 4

2 semester hour credits

Ec 12 History of Economic Thought

A critical review of the origin and development of economic thought from the ancient world to modern times is the aim of this course, since familiarity with the efforts of great economic thinkers in the past is essential for the thorough understanding of modern economic theory. After briefly noting the contributions of Plato and Aristotle, the early Christian fathers, and the writers of the Middle Ages, each of the main schools of economic thought is taken up in turn: the Mercantilists, the Physiocrats, the Classical School, the Socialists, the Historical School, the Austrian School, and Alfred Marshall. Some attention is paid to recent theoretical developments in Europe and the United States. As far as possible the course is based upon the reading of the original writing of the most significant thinkers.

Pre-requisite: Ec 3, Ec 4

2 semester hour credits

Ec 13 Business Cycles

After a study of the conditions which underlie cyclical fluctuations in prices, volume of trade, physical production, and employment, a careful analysis is made of the more significant theories of the business cycle. The possibilities of controlling such fluctuations and of initiating recovery receive extended attention. Throughout the course emphasis is placed upon the current phase of the business cycle and its peculiar problems.

Pre-requisite: Ec 5, Ec 6

2 semester hour credits

Ec 14 International Economic Relations

A careful examination of the important principles of international trade and finance precedes a critical survey of the international commercial policies of modern nations, with special reference to the United States. Such broader problems as the international control of raw materials, exchange restrictions, international cartels and the economic activities of the League of Nations and other international organizations are considered.

Pre-requisite: Ec 5, Ec 6

2 semester hour credits

Ec 15 Advanced Economic Theory

In this course human values constitute the criterion by which existing economic institutions are evaluated. A systematic survey is made of the effects of the inherent characteristics of capitalism upon human welfare.

2 semester hour credits

Ec 16 Advanced Economic Theory

A continuation of Ec 15. Various proposals for economic and social reconstruction are analyzed and their soundness judged upon the basis of their effect upon human welfare. Considerable attention is paid to the possibilities of a planned economy.

2 semester hour credits

Ec 17 Statistics

This course is intended to give the student an understanding of statistical principles and methods and their practical application in the social sciences. A study is made of the nature, sources, collection and organization of statistical facts; the presentation of such facts in tabular or graphic form, the various averages, measures of dispersion, and the construction and use of index numbers.

2 semester hour credits

Ec 18 Statistics

The analysis of time series occupies the major portion of this continuation of Ec 17 Statistics, and includes the methods of obtaining trends, seasonal indexes, and the measurement of cyclical variation. The application of correlation analysis in the field of social science is given extended attention.

2 semester hour credits

English

E 1 English I

A course in composition with especial emphasis on exposition. Principles of grammar and rhetoric are reviewed rapidly but thoroughly. Contemporary essays are studied both for their value as models and as enrichment of the student's background. Themes on subjects largely drawn from or related to the student's life and study are a weekly requirement.

3 semester hour credits

E 2 English I

A continuation of E I. Toward the end of the term a careful study is made of letter writing.

3 semester hour credits

E 3 Contemporary Drama

This course combines advanced work in composition with studies in drama. Eight plays by American and European dramatists are read and analyzed. Class discussions aim to develop in the student an ability to appreciate literary values. In the assignment and correction of weekly themes, which form the basis of the work in composition, emphasis is laid on effective theme organization and precision in the expression of ideas.

2 semester hour credits

E 4 Contemporary Novel

The novel is studied through an analysis of examples of the various types of contemporary fiction. Outside reading is an important part of the work of the course. Weekly theme writing is continued.

2 semester hour credits

E 7 Creative Writing

For students interested in imaginative writing. Original papers by the students will be discussed in class and in weekly conference with the instructor. The principles underlying creative writing will be carefully studied.

1½ semester hour credits

E 8 Creative Writing

Continued practice in creative writing supplemented by an analysis of the work appearing in the better magazines. The shorter forms will be emphasized.

Pre-requisite: E 7

1½ semester hour credits

E 9 Journalism I

The newspaper technique, with practice in re-writing. The general tasks of an "inside" man and the functions of the editorial department.

1½ semester hour credits

E 10 Journalism I

The problems of reporting and newswriting, with written assignments in all types of spot news reporting.

Pre-requisite: E 9

1½ semester hour credits

E 11 Journalism II

Editing the news. The writing of editorials, feature articles, and columns.

1½ semester hour credits

E 12 Journalism II

A general practice course in newspaper writing, the covering of special assignments, and editorial problems.

Pre-requisite: E 11

1½ semester hour credits

E 13 Effective Speaking

This course offers practical training in the preparation and presentation of the various types of speeches. The instruction will be planned to eliminate defects of voice, posture, etc., and to develop in the student an ability to speak easily, naturally, and forcefully.

1 semester hour credit

E 14 Effective Speaking

Continued practice in oral presentation, impromptu and extempore speaking, organization of material, consideration of the audience, etc., form the basis of the course.

1 semester hour credit

E 15 Survey of English Literature

A survey of English literature to 1800. After a brief study of the social and political background of each literary period, the writing of the period is considered, and the more important writers are studied and read in detail. The purpose of the course is to give the student an appreciation of English literature as a whole, and an intimate knowledge of its major figures.

2 semester hour credits

E 16 Survey of English Literature

A survey of English literature from 1800 to the present century. The outstanding writers are read, studied, and related to the general background of nineteenth-century England. The purpose of the course is to give the student an understanding of the writers who contributed most to the formation and development of modern literature in England.

2 semester hour credits

E 17 English Drama Before Shakespeare

A study of the origins and of the growth of English drama from its beginning to its culmination in the work of Shakespeare. A discussion of the morality plays will be followed by a careful consideration of the influence of Plautus, Terence, and Seneca on the dramatists of the age. Plays by Lyly, Peele, Greene, Kyd, and Marlowe will be read as a background for Shakespearean drama.

2 semester hour credits

E 18 Chaucer

An introduction to the language and literature of Chaucer and his contemporaries, with special attention to the "Canterbury Tales." The course includes a consideration of Chaucer's influence on the growth of the language, an examination of the "roman de tiroir" form, and a survey of the chief types of European popular narrative which the "Canterbury Tales" represents.

2 semester hour credits

E 19 Shakespeare

An introduction to the work of Shakespeare. The Elizabethan period, Shakespeare's London, the Elizabethan stage and audience, and the plays of Shakespeare's contemporaries will be discussed in lectures. Five plays will be studied.

2 semester hour credits

E 20 Shakespeare

Lectures will be given on Shakespearean grammar, the text of Shakespeare, editors' problems, etc. Four plays will be carefully analyzed.

2 semester hour credits

E 21 Nineteenth Century Poetry I

Background forces which shaped the Romantic period will be carefully studied; the influence of German idealists, of the French Revolution, and of the natural reaction from the classicism of Pope and Johnson will be analyzed and evaluated. Poetry of Wordsworth, Coleridge, Byron, Keats, and Shelley will be studied critically.

2 semester hour credits

E 22 Nineteenth Century Poetry II

A study of the poetry of the Victorian era with emphasis on the writings of Browning and Tennyson. The influence of the age on its poets will be carefully considered.

2 semester hour credits

E 23 Eighteenth Century Prose

An examination of the important prose of the century, with particular emphasis on Defoe, Swift, Addison, Steele, Burke, and Paine. Although the political strife of the period as reflected by these writers will be stressed, the strictly literary essay will not be neglected.

2 semester hour credits

E 24 Nineteenth Century Prose

The philosophy of laissez-faire, the idea of evolution, the growth of imperialism, the Oxford Movement, and the Fabian essays in socialism will be analyzed in this course. Carlyle, Darwin, Ruskin, Morris, and Shaw will be the principal writers studied. The literary and non-controversial essay as exemplified by Coleridge, DeQuincey, and Hazlett will be read and discussed.

2 semester hour credits

E 25 American Literature to 1860

A survey of American literature from colonial times to the triumph of the transcendental movement in New England. The work of Bryant, Irving, Cooper, Poe, Emerson, Thoreau, Lowell, Holmes, Longfellow, and Melville will be emphasized.

2 semester hour credits

E 26 American Literature After 1860

Continuing E 25, the course will consider the rise of realism after the Civil War, the development of American humor, the appearance of local color writers, and modern trends since 1900.

2 semester hour credits

E 27 History of the English Novel

This survey will trace the development of the novel from the 18th century to the beginning of the Victorian era. It will deal with the maturing of the novel form in the hands of Defoe, Richardson, Fielding, and Smollett; the "Gothic romances" of Walpole and Lewis; and the novel of manners as seen in Jane Austen.

2 semester hour credits

E 28 History of the English Novel

This course will deal with the work of the Great Victorians, particularly Thackeray, Dickens, Eliot, Conrad, and Hardy. A few contemporary novels will be discussed. The student will be expected to read widely in the field.

2 semester hour credits

E 29 Great European Writers

An introduction to the classics of Ancient and Medieval literature. The purpose of the course is to acquaint the student broadly with our literary heritage and to furnish him background for later studies in literature.

2 semester hour credits

E 30 Great European Writers

A survey of the literature of Europe from the Renaissance to the beginning of the twentieth century.

2 semester hour credits

E 31 Modern Literature 1895-1915

Beginning with a study of late nineteenth-century literature in England and America, the course considers the principal literary developments of the period 1895 to 1915. New forms and methods in poetry, the novel, the short story, and the play are studied; illustrated by the work of literary groups and movements, and by such major writers as Walt Whitman and Henry James.

2 semester hour credits

E 32 Post-war Literature

A survey of contemporary literature in England and America. Outstanding writers are studied in detail. Some of the subjects discussed are recent changes in form and technique; literary experiments; the effect on literature of the World War, and of recent social changes. During the course each student writes a paper and presents a class report on a contemporary author.

2 semester hour credits

Mathematics

M 1 College Algebra

The study of algebra is scheduled to begin with the solution of the quadratic equation, simultaneous quadratics, and equations in quadratic form. However, a rapid but thorough review of the fundamentals of algebra precedes this. The solution of the quadratic is followed by a detailed study of the theory of exponents. Then follow radicals, series, variation, inequalities, and the elementary principles of the theory of equations. Considerable time is given to plotting and the use of graphs in the solution of equations. The elementary theory of complex numbers is also covered.

3 semester hour credits

M 3 Trigonometry

This is a complete course in trigonometry and should enable the student to use all branches of elementary trigonometry in the solution of triangles as well as in the more advanced courses where the knowledge of trigonometry is essential. Some of the topics covered are the trigonometric ratios; inverse functions; goniometry; logarithms; circular measure; laws of sines, cosines, tangents, half angles; solution of oblique and right triangles; transformation and solution of trigonometric and logarithmic equations. Considerable practice in calculation of practical problems enables the student to apply his trigonometry to problems arising in practice at an early stage. Additional work, graphical and algebraic, is done with the complex number, introducing De-Moivre's theorem and the exponential form of the complex number.

2 semester hour credits

M 4 Analytic Geometry and Introduction to Calculus

This being a basic course in preparation for any further study of mathematics, it requires a thorough knowledge of the fundamentals of algebra. The course covers cartesian and polar coordinates; graphs; the equations of simpler curves derived from

their geometric properties; thorough study of straight lines, circles, and conic sections; intersections of curves; transformation of axes; plotting and solution of algebraic equations of higher order and of exponential, trigonometric, and logarithmic equations; loci problems. The general equation of the second degree is thoroughly analyzed in the study of conic sections. Some time is devoted to curve fitting from empirical data.

Explicit and implicit functions, dependent and independent variables, some theory of limits, continuity and discontinuity are given special attention from both the algebraic and the geometric points of view. Some theorems on the infinitesimal are introduced, and a study is made of infinity and zero as limits. Relative rates of change, both average and instantaneous, and the meaning of the slope of a curve follow. The differential and the derivative as applied to algebraic functions with the geometric interpretation are then studied. Tangents to curves of the second degree follow here. Simple applications with interesting practical problems help to develop the interest here and lay a solid foundation for the study of the calculus. The introduction of the differential at the same time with the derivative helps considerably to bridge the large gap which usually exists when the student passes from the study of the elementary analytic geometry to the infinitesimal of calculus.

5 semester hour credits

M 5 *Differential Calculus*

The differential is introduced at the outset of the course, together with the derivative; geometric and practical illustrations are given of both; and both are carried along throughout the course. The work consists of differentiation of algebraic, trigonometric, exponential, and logarithmic functions, both explicit and implicit; slopes of curves; maxima and minima with applied problems; partial differentiation; parametric equations; derivatives of higher order; curvature; evolutes and involutes; points of inflection; related rates; velocities, acceleration; indeterminate forms; expansion of functions; series. Although the subject matter deals with considerable theory, constant sight is kept of the practical application of the theory. The geometric interpretation of every new subject is carefully defined, and problems are continually solved dealing in practical applications of the theory in geometry, physics, and mechanics.

Pre-requisite: M 4

3 semester hour credits

M 6 *Integral Calculus*

This course, a continuation of Calculus M 5, deals with integration as the inverse of differentiation as well as the limit of sum-

mation. The topics covered are methods of integration; use of integral tables; definite integrals; double and triple integrals; areas in rectangular and polar co-ordinates; center of gravity; moment of inertia; length of curves; volumes of solids; areas of surfaces of revolution; volumes by triple integration; practical problems in work, pressure, etc., depending on the differential and integral calculus for solution; solution of simpler differential equations.

3 semester hour credits

M 7 *Differential Equations I*

The elementary theory of differential equations and the method of solution of certain ordinary differential equations are offered here as a general course in mathematics. Although this is principally a problem course in solving differential equations, properties of the equations and of their solutions are deduced, and applications in the various fields of scientific work are analyzed.

Pre-requisite: M 6

3 semester hour credits

M 8 *Differential Equations II*

Special cases of first order equations are considered, and a fuller treatment of first order equations of higher degree leads to a consideration of envelopes, special loci, and particular curves. The general second order linear equation is studied, and the several well-known methods of attack are presented. Solution in series form of equations whose primitives are not made up of classified functions is studied. Elementary partial differential equations of the first and second orders, leading to a presentation of Fourier's Series, conclude the course.

Pre-requisite: M 7

3 semester hour credits

M 9 *Higher Algebra*

Complex numbers and the elementary theory of vectors start this course. It continues on with the solution of equations of the third and fourth degree, Horner and Sturm theorems, the solution of higher degree equations with the use of graphs. Some invariant forms are studied. Then follow general systems of equations with the complete study of determinants, and some of the elements of matrices. A study is made of the theory of elimination, linear dependence, and linear transformations. If time permits, a study is made of probability and related subjects.

Pre-requisite: M 1, M 3

3 semester hour credits

M 10 *Curve Analysis*

This course deals with the methods of approximation of roots; plotting; empirical equations; and alignment charts.

Pre-requisite: M 5

3 semester hour credits

M 11 *Solid Analytic Geometry*

The study of analytic geometry is extended here into three dimensions, mostly with rectangular co-ordinates, although cylindrical and spherical co-ordinates and the transformation between the three systems are also introduced. The equations of the first and second degree are analyzed. A study is made of line segments and angles; planes, linear equations in three variables; normal forms; systems of planes and angles; surfaces in general; quadric surfaces. Some work is done on general curves, certain special curves, surfaces of revolution, locus problems, and homogeneous co-ordinates.

Pre-requisite: M 4

3 semester hour credits

M 12 *Modern Geometry*

Complete analysis of geometry of circle and triangle; linear dependence; transformations; inversions; poles and polars; harmonic division and cross ratios; systems of co-ordinates.

Pre-requisite: M 4

3 semester hour credits

M 13 *Spherical Trigonometry*

This is a complete course in the study of spherical trigonometry, solving right and isosceles spherical triangles; Napier's rules; laws of sines, cosines, half-angles, and half-side formulas; Napier's analogies. A detailed solution of oblique spherical triangles including areas follows. Considerable time is spent on the celestial sphere and the astronomical triangle and on navigation, calculation of latitude and longitude, bearing, and time.

Pre-requisite: M 3

3 semester hour credits

M 14 *History of Mathematics*

In this course a survey is made of the development of various branches of mathematics, and attention is given to the lives of men who have made outstanding contributions to mathematical science.

2 semester hour credits

M 15 *Advanced Calculus*

No student should choose this course unless he is thoroughly familiar with the contents of courses M 5 and M 6. The subjects covered are continuity, indeterminate forms, applications of partial differentiation, vectors and differentiation of vectors, the complex variable, differentiation and functions of the complex variable, differentiation of integrals, envelopes.

Pre-requisite: M 6

3 semester hour credits

M 16 *Advanced Calculus*

This is a continuation of M 15. The course starts with work in differential equations, problems in damped vibration and the potential function. Other topics are the hyperbolic function; expansion in infinite series including Fourier series; integration of special forms with definite, multiple, and improper integrals; probability integral; Gamma function; Beta function; Bessel's function; line integrals and applications.

Pre-requisite: M 15

3 semester hour credits

M 17 *Series*

Various types of series and their uses. Study of limits, infinite series, tests for various types of convergence; divergence; algebraic operations with series; integration and differentiation; applications and use of special series.

Pre-requisite: M 5, M 6

3 semester hour credits

M 18 *Theory of Equations*

This course devotes itself more to the theory and analysis of equations and roots rather than to actual solutions. The properties of polynomials and continuity are studied. The complex number, algebraic and geometric form are both reviewed. The solutions of quadratic, cubic, and quartic equations are discussed and analyzed with various theorems on roots. Proof is given of the fundamental theorem; other theorems discussed are the remainder theorem, Horner's and Newton's methods, limits of roots, Rolle's theorem, Descarte's rule, Sturm's theorem, Budan's theorem and DeMoivre's theorem. Transformations are studied, and an analysis is made of rational, irrational, complex, and multiple roots. Symmetric functions including the relation of roots and coefficients are also taken up. Some work is done with discriminants. The course closes with the theory of least squares and curve fitting.

3 semester hour credits

Physics

P 1-A Survey of the Physical Sciences

The purpose of the course is to give a definite conception of the physical world to those students who ordinarily would not elect a science course but who need to know something about the contributions and the place of the physical sciences in con-

temporary civilization. This course begins with a study of the universe and solar system. Consideration is given to the principles of distance, mass and weight, and the simple dynamics of bodies. The earth is studied from the viewpoint of its geological, meteorological, and chemical aspects, these main fields introducing a non-mathematical discussion of magnetism, heat, and electricity.

4 semester hour credits

P 2-A Survey of the Physical Sciences

In this course, which continues P 1-A, the phenomena of light are taken up. Following this, consideration is given to spectroscopy and matter structure, the periodic table, acids, bases, salts, and organic compounds. The course concludes with a discussion of certain aspects of physics which are of practical importance in the household, such as heating, lighting, refrigeration, and electrical appliances.

4 semester hour credits

P 1 Physics I

A course in the study of wave motion, sound, and light. Molecular mechanics and other fundamental principles of physics are stressed at the beginning.

3 semester hour credits

P 2 Physics I

This is a thorough course in magnetism and electricity, covering all the details within the scope of standard college texts on these subjects. All lectures are illustrated by means of lantern slides, motion pictures, and special apparatus.

3 semester hour credits

P 3 Physics II

A course in the study of the fundamental principles of the mechanics of physics. Some of the topics covered are simple harmonic motion, uniformly accelerated motion, friction, work, energy, power, fluid pressure, angular velocity, centripetal force, equilibrium under the action of a series of parallel forces, and equilibrium under the action of concurrent forces.

Pre-requisite: M 1, M 3, P 2

2 semester hour credits

P 4 Physics II

The topics studied are thermometry, expansion of solids, liquids and gases, calorimetry, change of state including latent heat of fusion and vaporization (sublimation), triple point diagram, conduction and radiation, and the mechanical equivalent of heat.

2 semester hour credits

P 5 Physics Laboratory

This course consists of experiments in mechanics, light, electricity, and magnetism performed by each student supplementing the lecture and classroom work of courses P 1, P 2, and P 3. The experiments on mechanics include: the use of the vernier, micrometers and spherometer, the calculation of true weights, the funicular polygon, gyroscopic motion, simple harmonic motion and the determination of areas by means of the planimeter. Other experiments in this course include plotting the magnetic field about a bar magnet and the determination of the pole strength and field strength of the magnet, the position of images in a combination of lenses and one experiment on electrostatics.

1 semester hour credit

P 6 Physics Laboratory

A continuation of the experiments started in P 5 including experiments on sound and heat. Some of the experiments of this course are: the modulus of elasticity, the determination of the velocity of sound, the coefficient of cubical expansion of mercury, the air thermometer, the determination of the mechanical equivalent of heat, the study of the maximum and minimum thermometers, and the use of the spectroscope in the study of the bright line and solar spectra. The experiments of this course supplement the class work of courses P 1, P 2, P 3, and P 4.

1 semester hour credit

P 9 Advanced Physics

A study of atomic and molecular structure in the light of modern information. Electron theory is used extensively, an introduction is made to quantum theory, and sufficient of the concepts of relativity is advanced to be of use in the necessary developments.

Pre-requisite: P 4, M 8

3 semester hour credits

P 10 Advanced Physics

The subject matter of P 9 is used and enlarged to permit the study of wave mechanics, x-rays, radioactivity, and the structure of the spectrum.

Pre-requisite: P 9

3 semester hour credits

P 11 Advanced Physics Laboratory

This is a laboratory course in light. The problems studied are photometry, dispersion, interference, polarization, and spectroscopy.

Pre-requisite: P 4, P 6, or P 8

2 semester hour credits

P 12 Advanced Physics Laboratory

This course is based on corpuscular electricity. Experiments are performed on vacuum tubes, determination of the electronic charge, cathode ray oscillography, and various discharge tubes.

Pre-requisite: P 4, P 6, or P 8

2 semester hour credits

P 13 Acoustics

A complete mathematical study of the modes of vibration of strings, pipes, membranes; and a consideration of vibrating systems in general.

Pre-requisite: P 4, M 6

2 semester hour credits

P 14 Acoustics

A course in the application of the principles of P 13 to the problems of speech, audition, sound, filters, musical instruments, and the acoustics of auditoriums.

Pre-requisite: P 13

2 semester hour credits

ME 20 Applied Mechanics (Statics)

The subjects treated are collinear, parallel, concurrent, and non-concurrent force systems in a plane and in space; the determination of the resultant of such systems by both algebraic and graphical means, special emphasis being placed on the funicular polygon

method for coplanar force systems; the forces required to produce equilibrium in such systems; first moments; and problems involving static friction, such as the inclined plane and the wedge.

Pre-requisite: P 3

3 semester hour credits

ME 21 *Applied Mechanics (Kinetics)*

The subjects treated are continuation of first moments as applied to varying intensity of force and to the determination of center of gravities of areas and solids; second moments and the application to the determination of moment of inertia of plane and solid figures, radius of gyration, polar moment of inertia, product of inertia, principal axes, uniform motion, uniformly accelerated motion, variable accelerated motion, harmonic motion, simple pendulum, rotation, work, energy, momentum and impact.

3 semester hour credits

ME 22 *Strength of Materials*

The topics covered in this course are physical properties of materials, stresses in thin hollow cylinders and spheres, riveted connections of the structural and continuous plate type, welded connections, and beams; covering shearing force and bending moment with stress analysis due to these effects and the design of beams for both conditions.

Pre-requisite: ME 20

3 semester hour credits

ME 23 *Strength of Materials*

This is a continuation of ME 22 covering deflection of beams by the double integration method: stresses and strains in shafting due to torsion, angle of twist, horsepower; combined axial and bending loads, eccentric loads; compression members or columns by Enlers' column formula, and by those of the Gordon-Rankine, parabolic, and straight line type.

Pre-requisite: ME 22

3 semester hour credits

ME 24 *Advanced Mechanics*

Advanced problems in the strength of materials and dynamics are treated. Among the subjects under discussion are non-symmetrical bending, curved bars, flat plates, thick hollow cylinders, dynamical stresses in machine parts, and allied subjects leading to the more advanced applications of mechanics in machine design, the elastic theory, and photoelasticity.

Pre-requisite: ME 23

3 semester hour credits

ME 27 *Metallography*

The course in metallography is intended to show the student the relation between the crystalline structure of metals and their physical properties.

The theory of crystallization and the equilibrium diagram are studied. Specimens of metal of known composition are studied by use of the metallographic microscope and their physical properties compared. The effect of heat treatment on the crystalline structure is noted.

2½ semester hour credits

ME 30 *Thermodynamics*

In this introductory course in the fundamentals of thermodynamics the following subjects are discussed: general theory of heat and matter; first and second laws of thermodynamics; equations of state; fundamental equations of thermodynamics; laws of perfect gases; properties of vapors including development and use of tables and charts; thermodynamic processes of gases, and saturated and superheated vapors; and the general equations for the flow of fluids.

2 semester hour credits

EL 6 *Electrical Measurements*

The course comprises a brief study of measurements in general, and precision measure as applied to electrical measurements in particular. Resistance devices, galvanometers, ammeters, and voltmeters are next discussed, the treatment of other instruments being taken up later in connection with their use. This is followed by a detailed discussion of the methods of measuring various electrical quantities (which involves the use of visual indicating devices) resistance, resistivity, conductance; D.C. electromotive force, current, power, and energy. Some consideration is given to the principles and operation of vacuum tubes. Appropriate laboratory experiments are included.

Pre-requisite: P 2

2½ semester hour credits

EL 22 *Electrophysics*

This course begins with the development and interpretation of Maxwell's field equations and wave equations, and continues with the study of the electron, modern electrical theory, photo-electricity, x-rays, radio activity, and the quantum theory.

Pre-requisite: M 7

3 semester hour credits

Sociology

S 1A Introduction to Social Science

This course treats the European foundations of contemporary American culture. Economic, social, and political factors are emphasized.

4 semester hour credits

S 2A Introduction to Social Science

A survey of the development of American economic, social, and political institutions. Particular attention is paid to the process of transformation by which change occurred in order to provide a background for understanding the major social problems of the present day.

3 semester hour credits

S 1 Introduction to Sociology

In presenting a survey of the origins and sources of human society, this study provides orientation for the courses in principles and problems which follow. The several theories of organic evolution are discussed. The antiquity of man and basic anthropological data are considered. The racial and ethnic groupings of man are then studied in the light of biological, geographical, and cultural factors.

2 semester hour credits

S 2 Principles of Sociology

Facts and principles basic to a general knowledge of the field of sociology are presented. The origins, forms, and forces of human associations are discussed. Consideration is given the several leading schools of sociological thought. The course is designed to meet the needs of the student who desires only an elementary survey of the subject, as well as the student who plans to take advanced courses in social science.

2 semester hour credits

S 3 Social Problems

Attention is given the nature, complex causation, and inter-relatedness of social problems in general. Cultural change with its attendant lags, as well as other social forces and conflicts, are studied. While sociological theory is occasionally introduced to clarify the problem at hand, the course is essentially practical in character. Such problems as poverty and unemployment, race antagonisms, population pressures, and the broken home are considered. Optional field trips to various institutions give concreteness to the problems studied.

2 semester hour credits

S 4 *Social Pathology*

Similar to the course in Social Problems in background and approach, this study deals with the maladjustments and ills of human society. Emphasis is given those pathological conditions which exist in relations between the individual and the group. Typical subjects presented include mental defectiveness and disease, alcoholism and drug addiction, suicide, delinquency and crime, and pathologies of domestic relations. The field trips arranged for this course add to the practical knowledge of the social ills which are studied.

2 semester hour credits

S 5 *Criminology*

Delinquency and crime are defined, classified, and their causal factors indicated. The various theories as to what makes criminals are dealt with, and a brief history of crime is sketched. Legal and economic aspects of crime are summarized, but the study is mainly sociological. Prevention and correction of criminal behavior are stressed. Local institutions are visited.

2 semester hour credits

S 6 *Penology*

Closely related to the course in Criminology, this subject begins with an historical treatment of the punishment of criminals. Time is devoted chiefly to an understanding of modern methods and problems of dealing with offenders. Field trips are taken to criminal courts and penal institutions.

2 semester hour credits

S 7 *Principles of Social Ethics*

To understand more clearly the meaning of morality in social relations is the aim of this study. Right and wrong conduct is analyzed in the light of the highest values for human society. Moral laws are discussed, and the various systems of ethics are evaluated. Scientific attitudes are encouraged in order that one's moral judgments be compatible with one's best reflective thought.

2 semester hour credits

S 8 *The Family*

The historical development of the family is first traced, after which the course focuses upon the modern family. The monogamic family is contrasted with other types, and such unconventional forms as companionate and trial marriages are evaluated. Then follows an intensive study of family problems.

A constructive program is presented for strengthening the family as a basic unit in society.

2 semester hour credits

S 9 *Problems in Social Ethics*

Problems arising from differences in moral standards found in the various social groups will be examined. The question of ethical relativism and determinism will be considered. A selected number of specific problems in social ethics will be discussed.

2 semester hour credits

S 10 *Social Progress*

The historical development of the theory of progress, contemporary concepts of social progress, the agents of progress, and the phenomenon of regression are several of the subjects for study. The course is based on Hertzler's *Social Progress*, supplemented with lectures and collateral readings.

2 semester hour credits

S 11 *Social Control*

The methods by which social forces are controlled is the fundamental question with which the course deals. External and internal types of control of the social organism are discussed. The use of violence, the power of public opinion, and the application of certain principles of social psychology are examined.

2 semester hour credits

S 12 *Contemporary Sociological Trends*

A study is made of present-day basic social forces in an effort to determine whether they indicate a state of trendless flux or whether they move in a discernible direction. The course presupposes an elementary knowledge of the principles and problems of sociology. It observes contemporary social movements, correlates them, evaluates them, and endeavors to orient man in his society. Readings from current journals are assigned.

2 semester hour credits

S 13 *Sociology of Religion*

Religious beliefs, practices, and institutions are examined and evaluated in relation to their effects upon society at large. The great religions of the world are compared in the light of their contributions to the well-being and progress of mankind. The social creeds of the several leading denominations in America are discussed with respect to their attitudes towards race, industry, war, and other social problems. The influences of organized religion upon politics and educational institutions are given attention.

2 semester hour credits

S 14 Social Institutions

This course proceeds from the thesis that human society finds itself increasingly institutionalized, in occupation, government, religion, mutual aid, or play. It then studies the effect of the institutions upon the individual with the view of seeking to eliminate those elements which are undesirable and to encourage those which are desirable. The cycle of institutional development and the interpenetration of institutions are studied.

2 semester hour credits

S 15 Population Problems

Population pressure, contrasts between urban and rural population, migration, and pertinent types of social mobility are studied in this course. After a brief survey of population problems in several areas of Europe and the Orient, attention is then given to a careful analysis of population conditions in the United States. The many factors are shown which intensify the problem in our country in spite of its wide area. What principles have superseded those of Malthus? What immigration policies are most sound for our country in the long run? What methods can be adopted which will relieve the population pressure in our great cities? Such questions as these will be discussed.

2 semester hour credits

S 16 Urban Sociology

Upon studying the complex human society found in the various cities of the world, this course then turns to an analysis of the modern American city. Its types, social values, and pathological elements are discussed. Methods of city planning are considered. The belief on the part of some sociologists that democracy is doomed by its cities is examined in the light of typical problems of urban society.

2 semester hour credits

S 17 Vocational Study in Sociology

Students who contemplate engaging in some type of social service work either as a profession or as an avocation are advised to take this course. Types of social and institutional work are presented. Opportunities available and qualifications desired are discussed. Personnel and administrative problems are studied. The needs for new or modified legislation concerning such social questions as sterilization, birth-control, and the like are investigated. Students are expected to reserve some time for visiting and possibly rendering services at local institutions and agencies.

2 semester hour credits

MINOR FIELDS

Biology

B 1 General Zoology

An introductory course dealing with the basic principles of zoology. A survey of the main types of animals; their classification, structure, life history, distribution, and economic value. The laboratory work illustrates the lectures.

4 semester hour credits

B 2 General Botany

An introductory course dealing with the basic principles of botany. A general survey of the more important plant types throughout the vegetable kingdom; their classification, structure, life history, distribution, and economic value. The fundamentals of plant physiology are stressed. The laboratory work illustrates the lectures.

4 semester hour credits

B 3 Invertebrate Zoology

This course deals with the comparative development and structure of the organic systems of invertebrate animals as represented by the following phyla: Protozoa, Porifera, Coelenterata, Platyhelminthes, Nemertea and Nematelminthes; their biological and ecological relationships. The laboratory work consists of detailed dissection of representative types.

Pre-requisite: B 1

2½ semester hour credits

B 4 Invertebrate Zoology

Continues and presupposes Course B 3. In this part of the course, the lectures deal with the comparative development and structure of the various organ systems of invertebrate animals as represented by the following invertebrate phyla: Annelida, Echinodermata, Arthropoda and Mollusca; their biological and ecological relationships. The laboratory work consists of detailed dissection of representative types.

Pre-requisite: B 1

2½ semester hour credits

B 5 Vertebrate Zoology

This course deals with the comparative anatomy of the integument; the skeletal, muscular, digestive and respiratory systems of the principal classes of Vertebrates. The laboratory work consists of detailed dissection of representative types.

Pre-requisite: B 1

2½ semester hour credits

B 6 Vertebrate Zoology

Continues and presupposes Course B 5. In this part of the course, the lectures deal with the comparative anatomy of the vascular, excretory, reproductive and nervous systems together with the organs of special sense of the principal classes of Vertebrates. The laboratory work consists of detailed dissection of representative types.

Pre-requisite: B 1

2½ semester hour credits

B 7 General Physiology

A course which deals with the functions of the human body.

Pre-requisite: B 1, B 5, B 6

2 semester hour credits

B 8 Genetics and Eugenics

A course which deals with the laws of variation and inheritance; their application to man and to domestic animals and plants.

Pre-requisite: B 1, B 2

2 semester hour credits

B 9 Animal Histology

The lectures deal with the normal microscopic anatomy of the cell; histogenesis; and the fundamental tissues of various invertebrates and Vertebrates. The laboratory work illustrates the lectures by means of microscopic preparations.

Pre-requisite: B 1, B 5, B 6

2 semester hour credits

B 10 Animal Histology

Continues and presupposes Course B 9. In this part of the course, a detailed study is made of the normal microscopic anatomy of the organs of the lower and higher Vertebrates. The laboratory work illustrates the lectures by means of microscopic preparations.

Pre-requisite: B 1, B 5, B 6

2 semester hour credits

B 11 Vertebrate Embryology

The lectures deal with the general embryology and the early stages of development of *Amphioxus* and of the Teleost, frog, chick and pig. The laboratory work is devoted to the study of embryos in toto and in sections of the early stages of the frog and of the chick.

Pre-requisite: B 1, B 5, B 6

2 semester hour credits

B 12 Vertebrate Embryology

Continues and presupposes Course B 11. In this part of the course, the lectures deal with the later stages of development of the chick and pig, with comparisons with the frog. The laboratory work is devoted to the study of embryos in toto and in sections of the later stages of development of organs and organ systems in the chick and pig.

Pre-requisite: B 1, B 5, B 6

2 semester hour credits

Education

Ed 1 History of Education

Education is considered as the means by which nations have attempted to realize their social and spiritual ideals. This course traces the history of education from ancient times through the Greek and Roman periods, the Middle Ages, the Renaissance and Reformation, down to John Locke and the Enlightenment. The course is concerned with the development of points of view as well as with the details of organization and practice.

2 semester hour credits

Ed 2 History of Education

Beginning with the emotional reaction against formalism in life as exemplified by Rousseau, this course takes up the immediate background of modern education and traces the development of national systems. The influence of such men as Pestalozzi, Herbart, Froebel, Spencer, Mann, Barnard, Dewey, and others is studied in detail. The course closes with a consideration of present tendencies in education.

2 semester hour credits

Ed 3 Educational Organization and Administration

A study of the principles underlying the organization, administration, and supervision of public schools in the U. S. A. The course is illustrated with suitable problems taken from actual practice. It should be of special interest to students who contemplate teaching as a vocation.

2 semester hour credits

Ed 4 Educational Measurements

The course concerns itself with current problems in the field of educational tests and measurements. Most of the lectures are given over to a discussion of the construction and use of new type objective tests, with particular reference to the field of secondary education. The relative merits of the essay and the objective examination are considered in connection with the problem of grades and grading systems. Enough elementary statistics are included to enable students to use intelligently the results of testing. Emphasis is placed upon the importance of an accurate interpretation of test data and upon the futility of indiscriminate testing.

2 semester hour credits

Ed 7 Comparative Education

A discussion of the educational background and current theories and practices of England, France, and Germany. Emphasis is laid upon the bearing of European education on American practice. Much of the assigned reading is in current periodical literature, although a basic text is also used. Lectures, special reports, and class discussions comprise the media by which the course is conducted.

2 semester hour credits

Ed 9 Educational Sociology

The course considers the relationship between education and sociology. Educational objectives are set up from the findings of sociological research and the traditional curriculum is examined in the light of these objectives with a view towards its reconstruction. A critical attitude is maintained toward philosophical implications which will inevitably arise in the course.

2 semester hour credits

Ed 10 Educational Philosophy

A study of the relationship between the science of education and the philosophy of education is followed by a consideration of philosophies of education in the light of basic theses of the history of philosophy. Such topics as evolutionism, behaviorism, pragmatism, instrumentalism, and progressive education are viewed in the perspective of the history of philosophy.

2 semester hour credits

French

F 1 *Introductory French*

A course for beginners in the reading, writing, and speaking of French. Not open to freshmen.

3 semester hour credits

F 2 *Elementary French*

A continuation of the beginners' course with more emphasis on reading.

3 semester hour credits

F 3 *Intermediate French*

A course for those who have had at least two years of pre-college French. The work consists of a thorough review of grammar through composition and conversation in French.

3 semester hour credits

F 4 *Intermediate French*

This course continues the review of French grammar with more time devoted to the reading of modern authors.

3 semester hour credits

F 5 *Advanced French*

This course is intended to expand the student's literary and scientific vocabulary and to serve as an introduction to the study of French literature. The reading will be chiefly from writers of the 18th century.

Pre-requisite: F 4

2 semester hour credits

F 6 *Advanced French*

This course continues the work of F 5. The reading will be chiefly from 19th century writers.

2 semester hour credits

F 7 *Readings in French Literature*

This course is designed to make the student familiar with the outstanding works of French writers and to furnish him with material for the comparison of French literature with the literature of other nations. The readings will cover the earlier period of French literature to 1700.

Pre-requisite: F 6

2 semester hour credits

F 8 *Readings in French Literature*

This course continues the work of F 7. The readings will cover the period from 1700 to the present day.

2 semester hour credits

Geology

Gy 1 *General Geology*

A study of earth movements and various terrestrial applications of solar energy. Lectures on fundamental general facts as to origin and movements of the earth, weathering, work of winds, underground and surface waters, glaciers and the glacial period, lakes and swamps, and vulcanism.

1½ semester hour credits

Gy 2 *General Geology*

Course Gy 1 is continued with such topics as mountain formation, oceans, oceanic life, atmosphere touching upon meteorology. A considerable portion of time is given to the study of igneous, sedimentary and metamorphic rocks, supplemented by laboratory and field work.

1½ semester hour credits

Gy 5 *Historical Geology*

A review of the beginning of the earth, its development and historical significance of rock characters. This is followed by a study of the pre-Cambrian Paleozoic and the early Paleozoic Subera.

2 semester hour credits

Gy 6 *Historical Geology*

Continuation of the first semester taking in the late Paleozoic Subera, the Mesozoic and Cenozoic periods, and continuing through the geologic history of man.

2 semester hour credits

German

G 1 *Introductory German*

A course for beginners in the reading, writing, and speaking of German.

3 semester hour credits

G 2 *Elementary German*

A continuation of the beginners' course with more emphasis on reading.

3 semester hour credits

G 3 *Intermediate German*

A course for those who have had some previous study of German. Study is carried on through reading, composition, and conversation in German.

3 semester hour credits

G 4 *Intermediate German*

This course continues the review of German grammar with more time devoted to the reading of modern authors.

3 semester hour credits

G 5 *Advanced German*

This course is intended to expand the student's literary and scientific vocabulary and to serve as an introduction to the study of German literature. The reading will be chiefly from writers of the classical period.

Pre-requisite: G 4

2 semester hour credits

G 6 *Advanced German*

This course continues the work of G 5. The reading will be chiefly from writers of the 19th century.

2 semester hour credits

G 7 *Readings in German Literature*

This course is designed to make the student familiar with the outstanding works of German writers and to furnish him with material for the comparison of German literature with the literature of other nations. The readings will cover the earlier period of German literature to 1800.

Pre-requisite: G 6

2 semester hour credits

G 8 *Readings in German Literature*

This course continues the work of G 7. The readings will cover the period from 1800 to the present day.

2 semester hour credits

Government

Gv 1 American Government and Politics

The study of our National Government with respect to its organization and function; its powers and limitations under the Constitution; its legislative, administrative and judicial machinery under the party system of government and bureaucracy.

2 semester hour credits

Gv 2 American Government and Politics

A more careful study of the relationships of our federal, state and municipal governments, including an analysis and comparison of the various state governments and types of municipal government with respect to state and local agencies for carrying out the executive, legislative and judicial functions of government in a democratic country.

2 semester hour credits

Gv 3 Municipal Government

This course is a study of the machinery of city government in the United States, treating specifically the growth of the American city, the duties and powers of the municipal corporation, the organs of municipal government and their interrelations, and an analysis of the frame-work and functionalizing mechanism of municipal organization.

2 semester hour credits

Gv 4 Comparative Government

A course which presents the processes and institutions by which government is being attained in the leading nations of the world.

The course is designed to give breadth of view and develop a sympathetic appreciation of what people of other races and nationalities are doing to meet the demands of modern society.

2 semester hour credits

Gv 5 American Constitutional Law

Following a careful study of the influences affecting the framing of the Constitution, attention is turned to the leading constitutional principles of the American government as developed through judicial interpretation.

2 semester hour credits

Gv 6 *American Constitutional Law*

A continuation of Gv 5. Primary emphasis is placed upon the relation of constitutional law to present day problems with particular reference to such items as "due process of law" and "inter-state commerce".

2 semester hour credits

Gv 7 *Origins of Political Theory*

A survey of political philosophy from Plato and Aristotle to Bentham. The nature, origin, forms, and ends of the state and government are covered.

2 semester hour credits

Gv 8 *Modern Political Theory*

A critical study is made of the major developments in political theory since Bentham with special reference to the influence of these developments upon American politics and political institutions. Attention is paid to the modern conflict between the democratic and the totalitarian conceptions of the state.

2 semester hour credits

Graphic Arts

GA 5 *Principles of Composition in Art*

A comprehensive course in the appreciation of visual art, emphasizing the use and arrangement of line, mass, and color in composition. By means of textbook, pictures, lantern slides, and museum trips, the class will study actual works of art to discover their patterns and structure.

This course is recommended but not required as a preparation for the courses in History of Art. It is also suggested for students who want merely to increase their enjoyment of art by studying the aims and resources of the artist.

3 semester hour credits

GA 6 *Freehand Sketching*

A course in freehand drawing to train the student to see and record shapes rapidly and in proper proportion, both in outline and in light and shade. This course includes an introduction to lettering; orthographic, oblique and perspective projection; figures in action; and shades and shadows.

Open only to students who by interview with the instructor have given evidence of some facility in elementary sketching.

3 semester hour credits

GA 7 *History of Art*

A study of the characteristics and development of the visual arts; architecture, sculpture, and painting from earliest times through the Roman period. Lectures are supplemented by lantern slides and the work of the course includes some study at nearby museums.

2 semester hour credits

GA 8 *History of Art*

An examination of the characteristics and development of the visual arts; architecture, sculpture, and painting from early Christian times through the Renaissance period. Lectures are supplemented by lantern slides and the work of the course includes some study at nearby museums. This course is a continuation of GA 7, but does not presuppose it.

2 semester hour credits

GA 9 *Art in Industry*

This course is directed toward a study and development of the applications of design theory to modern manufacturing. Through an analysis of typical problems the class will examine the background of industrial design and discover how the principles of art may be used to improve the form of such products as containers, tools, household machinery, furniture, and motor cars.

2 semester hour credits

GA 10 *Art in Merchandising*

A course in the application of the laws of composition and design to the problems of aesthetic appeal in advertising media. Lettering, typography, and design problems relating to advertising panels, placards, pamphlets, bookcovers, etc. will be discussed.

2 semester hour credits

History

H 1 *History of Civilization*

This course is primarily a background course. It consists of a brief outline of the origin of man, paleolithic and neolithic men and cultures, the transition to copper and bronze cultures, the development of writing and various alphabets, and the early civilizations of Asia, Egypt, Greece and Rome.

3 semester hour credits

H 2 *History of Civilization*

This course is a continuation of H 1 with an account of the later history of Rome, medieval learning and literature, the Crusades, religious change in Europe, and national cultures and science in the 16th and 17th centuries.

3 semester hour credits

H 5 *Europe, 1789-1870*

This course aims at describing and interpreting the development of European states from the French Revolution to 1870. Major topics include the Metternich system, the emergence of French Republicanism, and the unification of Italy and Germany. Non-political factors receive much attention throughout the course.

2 semester hour credits

H 6 *Europe, 1870-1936*

The international relationships which precipitated the tragedy of 1914 are considered. The rise of militarism and nationalism, secret diplomacy, propaganda and the press, the "incidents" which led to the World War, the conduct of the war, the peace treaties, and the rise of socialism and fascism are discussed in this course.

2 semester hour credits

H 7 *England to 1688*

This course surveys the political, social, religious, and economic development of England to the Revolution of 1688. Political history receives the major emphasis, but stress is placed upon the rise of the English institutions which represented England's outstanding contribution to civilization.

2 semester hour credits

H 8 *England Since 1688*

A continuation of H 7. A study is made of the constitutional form of government and democracy, the expansion of the Empire, the evolution of the British Commonwealth of Nations, and the position and influence of the Empire in world affairs.

2 semester hour credits

H 9 *The United States to 1865*

This course is an interpretation of the events which shaped the American nation to the Civil War. Social customs, economic influences, racial contributions, and humanitarian movements are not neglected even though the political history is stressed.

2 semester hour credits

H 10 The United States Since 1865

Major attention is given to the social, economic, and political foundations of recent history in this survey of the transition of America from an agricultural to an urban industrialized society since the Civil War. Consideration is given to the problems arising with the emergence of America as a world power.

2 semester hour credits

H 11 Latin American History

This course deals with the European background of Spanish and Portuguese colonization in the New World, the exploits of the conquistadores, the Indian civilizations, colonial institutions, and the forces which gave rise to the revolutions in the early 19th century.

2 semester hour credits

H 12 Latin American History

This course continues H 11, and describes the Wars of Independence and the rise of the republics. A study is made of the international relations of the Latin American countries, the Monroe Doctrine, and the Pan-American conferences.

2 semester hour credits

Philosophy

Ph 1 Introduction to Philosophy

This introductory course combines the historical and systematic approaches to the subject. The historical treatment includes a survey of the chief philosophers and the development of basic philosophical ideas. The systematic treatment presents the several types of philosophy, such as realism, materialism, idealism, and pluralism. The place of philosophy is considered in its relation to ethics, religion, and natural sciences. The course both acquaints the student with facts about philosophy and trains him to think philosophically.

2 semester hour credits

Ph 2 Problems of Philosophy

The chief systems of thought are applied to what may be termed the persistent problems of philosophy. The problems are to be found in the fields of epistemology, teleology, and metaphysics. The following topics suggest representative problems which will be studied: the relation between mind and body, the nature and extent of freedom of the will, the validity of knowledge, and the bearing which the more recent views in physics and psychology have upon related philosophical problems.

2 semester hour credits

Ph 3 Philosophy of Religion

Fundamental questions of religious belief are examined in the light of philosophy. Modern religions are compared with respect to their views on the nature of the Deity, the meaning of life, and the relationship between man and God. Further topics for study include the question of the validity of mysticism and intuitive knowledge of religious truth, the immortality of the soul, the meaning of the supernatural, the presence of natural evil, and the relation of morality to religion.

Students may take Philosophy of Religion without having had any other course in this department, although there is an advantage in having had the Introduction to Philosophy.

2 semester hour credits

Ph 4 Logic

Formal logic is subordinated in this course to the more practical consideration of the methods of critical and reflective thought. Common fallacies in logic are indicated, and the student is given frequent exercises in correct reasoning. Attention is given to the principles of induction, deduction, verification, syllogism, and assumption. To assist the student to think clearly and correctly is the essential purpose of this modified course in logic.

2 semester hour credits

Physical Education

PE 2 Hygiene

One class hour a week is devoted to the study of information closely related to the Physical Training work and to personal and mental hygiene. For this class lecture, each student is assigned at least one hour of outside study based on the required textbook. The course includes enough of the fundamentals of physiology and anatomy to enable the student to understand such parts of the course as require some knowledge of these subjects.

1 semester hour credit

PE 3-4 Physical Training

All first year students are required to take Physical Training. Health, strength, and vitality do not come by chance, but by constant attention to good habits of living.

The work in the course includes a formal calisthenic program, special exercise classes for the correction of postural defects, participation in the regular athletic program, including baseball, basketball, hockey, football, track, and many types of informal games. All members of the class are also required to learn to swim.

Students wishing to be excused from Physical Training because of physical defects are required to present a petition to the faculty supported by a physician's certificate.

PE 5 Principles of Physical Education

The course considers the place of physical education in the educational program in the United States. The development of physical education programs based on the changes in society from primitive to modern times is discussed, careful attention being given to the needs of the individual, as well as to the needs of the group. Relationship between medical service and the physical education department is considered, and methods of co-ordination between these two important departments are investigated. The history of physical education, in so far as it affects the modern program, is included in the course. Factors such as economic, social and political influences, which have an important effect on the conduct of the program, are also considered. School health programs are discussed, with particular emphasis upon the medical and physical examinations and tests and the procedures which follow. Diagnostic and remedial techniques, classroom hygiene, and principles of preventive and corrective exercise are discussed. The course also includes a consideration of the proper place occupied by interschool and intercollegiate athletics in the physical education program.

Required of all students electing Physical Education as a minor field.

2 semester hour credits

PE 6 Play and Recreation

The purpose of this course is to prepare students for leadership of leisure time activities. It considers the biological and sociological aspects of play and its increasing importance in modern life. From a practical point of view the course deals with the problems faced by the director of leisure time activities in the community, in the school, or on the playground. The course should be of special interest to students who contemplate entering social work or teaching.

2 semester hour credits

PE 7 History of Physical Education

To provide a valuable background for students in this field, this course traces the whole history of physical education from the days of the Greeks and the Romans up to the present. Attention is given to a number of special systems of training which have been developed in Europe.

The course is required of all students electing Physical Education as a minor field.

2 semester hour credits

PE 8 Administration of Physical Education

This course is designed to acquaint the student in the field of physical education with many of the administrative problems which are likely to arise in connection with his work. The subject matter includes a consideration of the objectives of the physical education program, personnel required, and various allied subjects such as gymnasia, athletic fields, and the construction and maintenance of these units. The conduct of the athletic program including requirements for equipment, arrangements of schedules, coaching, meets, etc., is also included. Required of all students electing Physical Education as a minor field.

2 semester hour credits

PE 9 Football

This course is designed to furnish the student interested in football coaching with a thorough knowledge of the sport. Careful consideration is given to the fundamentals in discussing the plays of each position in the line and backfield. Various well-known offensive and defensive systems are discussed for the purpose of considering their general merits, as well as adaptations to particular situations. Training and conditioning, rules and interpretation, and officiating are given proper attention.

2 semester hour credits

PE 10 Floor and Apparatus Work

The student is given actual practice in the use of the various types of equipment found in the gymnasium. This work, together with actual practice in floor work and the use of hand equipment such as dumb-bells, weights, etc., places the student in a position to understand and direct classes in the gymnasium. Emphasis is given to the importance of stimulating leadership in gymnasium activities.

2 semester hour credits

PE 11 Track and Field Events

The course considers the care and training of track athletes. Practice schedules, selection of material, conduct of meets, etc., are discussed. The viewpoint from which the topics are treated is that of the student of coaching technique. In connection with this course, action pictures taken from actual performances by world champions, together with moving pictures, are of great value in demonstrating the style and technique of track and field events.

2 semester hour credits

PE 12 Basketball and Baseball

Various systems in use throughout the country are compared and contrasted. Team play, offense, defense, signal systems, training and conditioning, rules, and officiating are among the topics studied. The student in this course should acquire a thorough knowledge of all phases of the sports.

2 semester hour credits

Psychology

Ps 1-A Orientation Problems

This course is designed to make the entering student explicitly aware of those facts, principles, and techniques which are significantly related to the maintenance of his intellectual efficiency and mental health in the college environment. Lectures, assigned reading, and individual conferences.

Ps 1 Introduction to Differential Psychology

An elementary survey of the psychology of individual differences including personality differences, together with a presentation of some of the practical applications of the findings of differential psychology.

2 semester hour credits

Ps 2 General Psychology

An introduction to general experimental psychology. The topics considered include learning, thought, memory, perception, and sensation.

2 semester hour credits

Ps 5 Educational Psychology

Considers the applications of psychological facts and principles to educational problems and practices.

Pre-requisite: Ps 1 and 2

2 semester hour credits

Ps 6 Educational Psychology

Continuation of Ps 5.

Pre-requisite: Ps 5

2 semester hour credits

Ps 7 Social Psychology of Everyday life

A course devoted to the psychological examination of some of the phenomena observable in everyday social life. These include customs, crazes, fashions, rumor, propaganda, crowds, leadership, competition, and co-operation.

2 semester hour credits

Ps 8 Social Psychology, Theory, and Methods

A survey of the field of social psychological theory and an examination of the experimental techniques utilized in this field of psychology. Special emphasis is placed upon attitudes and their measurement.

2 semester hour credits

Ps 9 Psychology of Personality

Presents a survey of historical and contemporary theories of the nature of personality. The problems of the generality of traits, the consistency of expression, and the relation of cultural factors to personality, growth, and integration will be discussed.

Pre-requisite: Ps 1 and 2

2 semester hour credits

Ps 10 Abnormal Psychology

An introduction to the field of psychopathology. The psychology of the neuroses and the minor disturbances of everyday life are emphasized. Interpretation of clinical findings in the light of some contemporary schools of psychology is included.

2 semester hour credits

Theses

A thesis in the College of Liberal Arts is considered to be an essay involving the statement, analysis, and solution of some problem in a special field. Its purpose is to demonstrate a satisfactory degree of initiative and power of original thought and work on the part of the candidate. A mere resumé of existing knowledge in some subject is not acceptable. This, it is true, must usually be made, but in addition thereto the student must show his ability to deal constructively with the data he has collected and his power to draw significant and reliable conclusions from his investigations. The completed thesis will be

examined for acceptance or rejection from the technical viewpoint by the Professional Departments interested and then forwarded to the Secretary of the Day Division. Final approval of the thesis rests with the Dean. When it is accepted, the thesis becomes the property of the college and is not to be printed, published, nor in any other way made public except in such manner as the Professional Department and the Dean shall jointly approve.

Theses are not required of seniors in the College of Liberal Arts. To certain students who wish to do so, however, the privilege of writing a thesis may be granted by the Faculty Committee on Theses in accordance with the following regulations:

1. To be eligible to write a thesis a student must have attained a scholastic average of at least 2.0 or better through his middler year and the first half of his junior year.

2. Students who have met this minimum requirement may petition the Thesis Committee for the privilege of substituting a thesis for formal classroom work.

3. In his petition the student must state the subject which he proposes to investigate and give a brief statement of the purpose and scope of the proposed thesis.

4. Petitions for the privilege of writing theses must be submitted in writing to the head of the student's Professional Department not later than the middle of the second term of the junior year.

5. The Committee on Liberal Arts Theses comprises Professor Wilfred S. Lake, Chairman, Professor Charles W. Havice, and Professor Stanley G. Estes.

THE COLLEGE OF BUSINESS ADMINISTRATION

Aims and Methods

FORMERLY when a student finished high school and decided to make his way in the business world he could go about it in one of two ways: (1) Obtain a position in a particular field of commerce or industry and by beginning at the bottom learn the business from the job of the office boy to that of the president, or (2) enter a liberal arts college and after four years of general study enter business just as he would have had he not attended college. It was hoped that his broad college training and collegiate contacts would push him along "through the ropes" faster than the young man who went straight into business from high school. In either event this system of apprenticeship worked out very well in training a man in business and those who had the push and ability went to the front. This continued just so long as business organization was limited to relatively small units. In the small business there was time and opportunity for employer and employee — boss and apprentice — relationships. A man could learn much from his superiors, and recognition in the way of promotion in salary or responsibility rewarded those whose ability warranted it.

The Problem of today

What of today? Can a student go "through the ropes" and progress today as his father did in his youth and early manhood? The answer is: probably not. We can see just reason for the negative answer when we consider our present business world. We are surrounded on every hand by "big business" where the employee is lost in the vast number of workers of every large organization. The old time employer who trained his own men is passing out of the business scene. This does not mean that there is any less need for training about the conduct of business. It does mean that the training has got to be done by some other person or institution especially equipped to do the job in a most thorough manner. Actually the training for business positions of real importance is more necessary today than ever before. To satisfy this very apparent need colleges of business administration have appeared and grown in size and importance within the last twenty-five years. Among institutions for the training of young men who intend to undertake business as a profession, Northeastern University offers to those properly qualified a college training in business administration, leading to the degree of Bachelor of Science in Business Administration.

Business Education on the College Level

Although it is true that collegiate training for business is relatively new in the field of higher education, it is also evident that collegiate business schools are beyond the stage of early experimentation and have emerged on a level with other college courses recognized as higher education. There is a certain advantage in newness in that the mere youth of the college keeps it up-to-date in its outlook and scope of activity. In addition it is not bound by the traditional but obsolete practices sometimes found in older branches of education.

We hear a good deal today about the increasing need for specialists in business. It is asserted that modern business institutions have become so large that no one man can administer the many matters of routine involving executive judgment. The need for specialists is self-evident, but the training best suited for preparing the individual to take over specialized executive authority is not so evident. There are many schools offering a short course of training in preparation for these specialized positions. Such training cannot give a man the breadth of vision needed to go beyond minor managerial jobs demanding attention to exhausting details of daily routine.

To pass beyond this on the way to responsibility of truly executive nature a background of general business and related knowledge is essential. This background should precede the specialized study into a particular branch of business, enabling one to see the whole business and industrial picture and not merely one branch of it. Executive administration cannot be taught with any adequacy by attacking one subject, no matter how carefully planned the approach and how thorough the course of study. For instance, accounting is not the only means of arriving at a production budget based on sales estimates; it is but one of the tools. A knowledge of marketing, finance, statistics, and management technique are also needed. Vision and sound judgment can then make all of these branches of information serve to best advantage.

Aims of the College

In keeping with current trends in collegiate business education the educational policy of the College is directed toward the achievement of the following purposes:

First: To offer that type of education for business which will enable students to select most advisedly the field of business best suited to their aptitudes. The co-operative plan is particularly effective in this respect.

Second: To build for breadth of perspective in preference to over-specialization with its narrowing effects; therefore, to elim-

inate haphazard selection of courses, through concentration upon balanced, carefully co-ordinated curriculums, and thus to provide an adequate background for specialization as need arises.

Third: To provide a thorough knowledge of fundamental economic laws and an understanding of their applications in business.

Fourth: To develop the habits of accurate thinking that are essential to sound judgment.

Fifth: To develop in all students attitudes and ideals that are ethically sound and socially desirable.

Methods

In order that these aims may be realized as fully as possible, the College makes use of the problem and the case methods of instruction in addition to the lecture and recitation system. Mere textbook reading alone is almost valueless; students tend to accept without question what the textbook presents. Instead, they should learn to analyze every proposition, to challenge unsupported assertions, to think independently, and to support their thinking with logic and facts.

Hence, concrete problems and cases which executives have faced in accounting, marketing, organizing, and the like, constitute the bulk of class work. Students analyze problems, break them into their constituent parts, discover and list the factors for and against possible solutions, and work out a logical conclusion. In class they discuss their work with their instructors in the light of the latter's broader knowledge.

Such a method tends to develop an executive attitude. No lecture or mere reading of textbooks can do so. Students gain skill and facility in solving problems by actually solving many hundreds of them, thereby accumulating a ripe experience seldom open to the petty employee buried in routine and mechanical detail. What counts in business, as elsewhere, is not solely whether one possesses much knowledge, but whether through his knowledge one can logically and effectively solve the problems he confronts, or possibly prevent problems from arising. Experience in solving typical problems provides a background for anticipating and forestalling similar ones as well as for solving others that may arise.

Requirements for Graduation

Students may qualify for the degree of Bachelor of Science in Business Administration in one of the following curricula: Accounting, Banking and Finance, Business Management.

Candidates for the Bachelor of Science degree must complete all of the prescribed work of the curriculum in which they seek to qualify with a degree of proficiency acceptable to the faculty. A minimum of 115 weeks of college work is needed to fulfill this requirement. Students who undertake co-operative work assignments must also meet the requirements of the Department of Co-operative Work before they become eligible for their degrees.

No student transferring from another college or university is eligible to receive the B.S. degree until he has completed at least one academic year at Northeastern immediately preceding his graduation.

General Requirements

Any student who fails to show a satisfactory standard of general efficiency in his professional field may be required to demonstrate his qualifications for the degree by taking such additional work as the faculty may prescribe. If he is clearly unable to meet the accepted standard of attainment, he may be required to withdraw from the University. The degree conferred not only represents the formal completion of the subjects in the selected course of study but also indicates professional competence in the designated field of business administration.

Graduation with Honor

Candidates who have achieved distinctly superior attainment in their academic work will be graduated with honor. Upon special vote of the faculty a limited number of this group may be graduated with high honor. Students must have been in attendance at the University at least two years before they may become eligible for graduation with honor or with high honor.

Thesis Option

Theses are not required of candidates for the degree of Bachelor of Science in Business Administration. Students who show special aptitude for thesis work, however, may be permitted to substitute an appropriate thesis for equivalent work in class. Such permission must be obtained by the candidate from the board of thesis advisers.

*Curriculum I Accounting**First Year*

FIRST TERM			SECOND TERM		
No.	Course	Semester Hours	No.	Course	Semester Hours
E 1	English I	3	E 2	English I	3
H 1	Hist. of Civilization	3	H 2	Hist of Civilization	3
M 21	Business Mathematics	3	M 22	Business Mathematics	2
AC 1	Accounting I	3	AC 2	Accounting I	3
Ec 1	Intro. to Economics	3	Ec 2	Econ. Hist. of U. S.	3
Gv 1-A	American Govt.	3	Gv 2-A	American Govt.	3
Ps 1-A	Orientation Problems	0	PE 2	Hygiene	1
PE 3-4	Physical Training	0	PE 3-4	Physical Training	0
		18			18

Second Year

E 3	English II	2	E 4	English II	2
Ps 1	Int. to Diff. Psych.	2	Ps 2	General Psychology	2
Ec 3	Economic Principles	2	Ec. 4	Economic Principles	2
FI 3	Business Finance	2	FI 4	Business Finance	2
BU 1	Marketing Principles	2	BU 2	Marketing Principles	2
AC 3	Accounting II	2½	AC 4	Accounting II	2½
		12½			12½

Third Year

Ec 5	Economic Problems	2	Ec 6	Economic Problems	2
Ec 7	Money and Banking	2	Ec 8	Money and Banking	2
AC 5	Cost Accounting	2½	AC 6	Cost Accounting	2½
IN 5	Industrial Mgt. I	2	IN 6	Industrial Mgt. II	2
BU 3	Marketing Problems	2	BU 4	Marketing Problems	2
	Liberal Elective	2		Liberal Elective	2
		12½			12½

Fourth Year

AC 7	Advanced Cost Acctg.	1	AC 8	Advanced Cost Acctg.	1
AC 11	Advanced Acctg.	3	AC 12	Advanced Acctg.	3
E 13	Effective Speaking	1	E 14	Effective Speaking	1
Ec 9	Statistics	3½	Ec 10	Statistics	3½
FI 9	Credit Analysis	2	U 8	Legal Aspects I	2
	Liberal Elective	2		Liberal Elective	2
		12½			12½

Fifth Year

AC 9	Auditing	3	AC 10	Income Tax	3
AC 13	C.P.A. Problems	4	AC 14	C.P.A. Problems	4
U 9	Legal Aspects II	2½	U 10	Legal Aspects II	2½
C 11	Business Conference	1	C 12	Business Conference	1
	Liberal Elective	2		Liberal Elective	2
		12½			12½

Curriculum II Banking and Finance

First Year

FIRST TERM			SECOND TERM		
No.	Course	Semester Hours	No.	Course	Semester Hours
E 1	English I	3	E 2	English I	3
H 1	Hist. of Civilization	3	H 2	Hist. of Civilization	3
M 21	Business Mathematics	3	M 22	Business Mathematics	2
AC 1	Accounting I	3	AC 2	Accounting I	3
Ec 1	Intro. to Economics	3	Ec 2	Econ. Hist. of U. S.	3
Gv 1-A	American Govt.	3	Gv 2-A	American Govt.	3
Ps 1-A	Orientation Problems	0	PE 2	Hygiene	1
PE 3-4	Physical Training	0	PE 3-4	Physical Training	0
		18			18

Second Year

E 3	English II	2	E 4	English II	2
Ps 1	Int. to Diff. Psych.	2	Ps 2	General Psychology	2
Ec 3	Economic Principles	2	Ec 4	Economic Principles	2
FI 3	Business Finance	2	FI 4	Business Finance	2
BU 1	Marketing Principles	2	BU 2	Marketing Principles	2
AC 3	Accounting II	2½	AC 4	Accounting II	2½
		12½			12½

Third Year

Ec 5	Economic Problems	2	Ec 6	Economic Problems	2
Ec 7	Money and Banking	2	Ec 8	Money and Banking	2
AC 5	Cost Accounting	2½	AC 6	Cost Accounting	2½
IN 5	Industrial Mgt. I	2	IN 6	Industrial Mgt. II	2
BU 3	Marketing Problems	2	BU 4	Marketing Problems	2
	Liberal Elective	2		Liberal Elective	2
		12½			12½

Fourth Year

FI 11	Public Utilities	2	FI 6	Corporation Finance	2
FI 13	Bank Org. and Admin.	2	FI 14	Adv. Banking Probs.	2
E 13	Effective Speaking	1	E 14	Effective Speaking	1
Ec 9	Statistics	3½	Ec 10	Statistics	3½
FI 9	Credit Analysis	2	U 8	Legal Aspects I	2
	Liberal Elective	2		Liberal Elective	2
		12½			12½

Fifth Year

FI 5	Public Finance	3	AC 10	Income Tax	3
FI 15	Investments	2	FI 16	Investments	2
FI 17	Insurance	2	FI 18	Insurance	2
C 11	Business Conference	1	C 12	Business Conference	1
U 9	Legal Aspects II	2½	U 10	Legal Aspects II	2½
	Liberal Elective	2		Liberal Elective	2
		12½			12½

*Curriculum III Business Management**First Year*

FIRST TERM			SECOND TERM		
No.	Course	Semester Hours	No.	Course	Semester Hours
E 1	English I	3	E 2	English I	3
H 1	Hist. of Civilization	3	H 2	Hist. of Civilization	3
M 21	Business Mathematics	3	M 22	Business Mathematics	2
AC 1	Accounting I	3	AC 2	Accounting I	3
Ec 1	Intro. to Economics	3	Ec 2	Econ. Hist. of U. S.	3
Gv 1-A	American Govt.	3	Gv 2-A	American Govt.	3
Ps 1-A	Orientation Problems	0	PE 2	Hygiene	1
PE 3-4	Physical Training	0	PE 3-4	Physical Training	0
		18			18

Second Year

E 3	English II	2	E 4	English II	2
Ps 1	Int. to Diff. Psych.	2	Ps 2	General Psychology	2
Ec 3	Economic Principles	2	Ec 4	Economic Principles	2
FI 3	Business Finance	2	FI 4	Business Finance	2
BU 1	Marketing Principles	2	BU 2	Marketing Principles	2
AC 3	Accounting II	2½	AC 4	Accounting II	2½
		12½			12½

Third Year

Ec 5	Economic Problems	2	Ec 6	Economic Problems	2
Ec 7	Money and Banking	2	Ec 8	Money and Banking	2
AC 5	Cost Accounting	2½	AC 6	Cost Accounting	2½
IN 5	Industrial Mgt. I	2	IN 6	Industrial Mgt. II	2
BU 3	Marketing Problems	2	BU 4	Marketing Problems	2
	Liberal Elective	2		Liberal Elective	2
		12½			12½

Fourth Year

BU 7	Sales Management	4	BU 8	Sales Management	4
E 13	Effective Speaking	1	E 14	Effective Speaking	1
Ec 9	Statistics	3½	Ec 10	Statistics	3½
FI 9	Credit Analysis	2	U 8	Legal Aspects I	2
	Liberal Elective	2		Liberal Elective	2
		12½			12½

*Fifth Year**Courses required of all Management Students*

BU 11	Business Policy	2	BU 12	Business Policy	2
U 9	Legal Aspects II	2½	U 10	Legal Aspects II	2½
C 11	Business Conference	1	C 12	Business Conference	1
	Liberal Elective	2		Liberal Elective	2

Distribution Option

BU 13	Advertising	2	BU 14	Advertising	2
BU 17	Retail Merchandising	3	BU 18	Retail Merchandising	3

Production Option

AC 7	Adv. Cost Acctg.	1	AC 8	Adv. Cost Acctg.	1
IN 11	Methods Engineering	2	IN 16	Personnel Adminis.	2
FI 17	Insurance	2	FI 18	Insurance	2

Synopses of Courses Offered

On the pages which follow are given the synopses of courses offered in the several curricula of the College. Courses offered in the first semester bear odd numbers; those offered in the second semester bear even numbers.

Freshman courses extend over a full semester of 18 weeks. Upperclass courses are uniformly 10 weeks in length each term. The University reserves the right to withdraw any course in which there is insufficient enrolment.

AC 1 Accounting I

This course presents the fundamental principles of accounting theory and practice in a manner designed to meet the needs of students who intend to specialize in accounting as well as those who require a knowledge of accounting as a preparation for the study of banking and finance, production management, and marketing. Beginning with a consideration of the need for and the purpose served by accounting, a study of the balance sheet and operating statement is presented so that the ultimate goal and purpose of accounting is understood before the mechanical methods of recording business transactions are presented. The course then takes up specific balance sheet accounts; the law of debit and credit; the theory of nominal accounts; construction and interpretation of accounts; the recording process; the trial balance; construction of financial statements; the need for adjustments at the end of the period; depreciation; deferred and accrued items.

3 semester hour credits

AC 2 Accounting I

This course continues the work of the first semester with increased emphasis placed on accounting and interpretation of accounts. The main topics covered are closing of books, starting the new period, comparative statements, control accounts, and the operation of petty cash systems.

3 semester hour credits

AC 3 Accounting II

This course is a continuation of the fundamental principles of accounting. Greater emphasis is placed, however, on the accounting aspect of management. Special books, departmental accounts and statements, and accounting for manufacturing are specifically introduced. One of the main features of this course is the introduction of the analytical aspect of accounting.

2½ semester hour credits

AC 4 Accounting II

The approach of AC 3 is continued with greater stress on the accounting rather than bookkeeping aspects. Continuity is aimed at throughout. Accounting for business organizations occupies the major part of the course. Formation and operation of partnerships and corporations are thoroughly covered. Special emphasis is placed on the valuation of partnership and corporation accounts. Problems dealing with branch accounting, installment sales, and bonds will also be studied in this course.

2½ semester hour credits

AC 5 Cost Accounting

The structure of factory costs from the executive's viewpoint is studied in this course. The subject is approached chiefly from the management point of view. Problems are presented in a summarized form in order to stress the fundamental aspects of costs. Managerial control through the use of accounts is emphasized at the beginning of the course. Some of the specific topics covered are accumulation and distribution of cost data, process cost, job cost, historical cost, estimated cost, standard cost, and spoilage cost.

2½ semester hour credits

AC 6 Cost Accounting

This course is designed to develop in the student the managerial ability to control production, operating, and distribution costs through the use of cost accounting and the budget. Methods of costing and controlling materials, labor, and expenses are considered in detail. Cost variations are analyzed. Joint cost and by-product cost are introduced.

2½ semester hour credits

AC 7 Advanced Cost Accounting

The frame work of factory accounting is taken up in this course. Problems are presented chiefly in a summarized form in order to stress the fundamental aspects of the technic of cost accounting. The course is approached from the accounting point of view. Some of the specific topics covered are accumulation and distribution of cost control data, preparation of the budget as a control agency, executive reports, standard costs, spoilage cost, purchases, materials, and cost variations.

1 semester hour credit

AC 8 *Advanced Cost Accounting*

This course is designed to develop in the student the analytical and critical power involved for the proper understanding of the various types of cost problems. The subject is approached from the accounting point of view. Problems dealing with materials, labor, and expenses are studied in detail. The advanced phases of cost are taken up such as costing of by-products, joint-cost, debatable points in cost accounting, cost systems, problems of unused capacity, and cost control in typical industries.

1 semester hour credit

AC 9 *Auditing*

This course contemplates the application of accounting knowledge to the analysis and interpretation of accounting records. Specific cases are used for outlining the mode of procedure best adapted to the intelligent examination of accounting records and the compilation of reports on which the management can base plans for future operations. Balance sheet audits, detailed audits and special investigations for credit and other purposes receive due attention. The preparation and proper preservation of working papers is an essential feature of the course. Stress is laid on the matter of report writing and the compilation of statements and schedules that will be intelligible to the business man who is not an accountant.

3 semester hour credits

AC 10 *Income Tax*

In this course the fundamental principles of the application of Federal and State income taxation are presented by the problem method whereby the principles are applied to a stated set of facts. The case problems will include methods of accounting for income, sales and exchanges, installment sales, dividends, compensation for services, tax-free securities, depreciation, obsolescence, depletion, bad debts, contributions, and withholding information at the source. The social security laws are introduced.

3 semester hour credits

AC 11 *Advanced Accounting*

This course is designed to develop in the student the professional viewpoint. It will begin with a general review of the accounting principles studied in the first three years. Some new topics are introduced such as insurance, coinsurance, statements of affairs, receivers' accounts and reports, realization and liquidation statements, dissolution and liquidation of partnerships, statements of application of funds, investment accounting, venture accounts, and consignment sales.

3 semester hour credits

AC 12 *Advanced Accounting*

This course is a continuation of AC 11 and in substance follows the same method of approach. Additional topics introduced are correction of statements; estates accounting covering wills, duties of executors and administrators; general, specific, and demonstrative legacies; principal and income; legal accounting to the probate court; foreign exchange, and an introduction to consolidated statements and reports.

3 semester hour credits

AC 13 *C.P.A. Problems*

The purpose of this course is to provide for the application of the knowledge of accounting principles and practice gained in the preceding courses to the analysis and solution of complex problems involving a recognition of the economic, legal, and social aspects of various forms of business organization. The course content consists chiefly of problems given in C.P.A. examinations. All phases of partnership, corporation, bond, depletion, and cost accounting are critically covered.

4 semester hour credits

AC 14 *C.P.A. Problems*

This course continues AC 13. Great emphasis is placed on the preparation of working papers and the taking of the C.P.A. examination. The topics covered in addition to a general review are consolidation, municipal accounting, bank accounting, brokerage accounting, adjustments of complex statements and reports, actuarial problems, and institutional accounting.

4 semester hour credits

Banking and Finance

FI 3 Business Finance

The fundamental principles of finance are approached in this course through an examination of the capital requirements and the skeletal structures of the basic forms of business organization. Such topics as promotion, proprietorships, partnerships, and corporations are studied with special attention being paid to the management, control, long and short-time financing, and expansion of business under the different forms.

2 semester hour credits

FI 4 Business Finance

A continuation of FI 3 Business Finance. This course deals with the application of the principles of finance to such problems as working capital requirements, surplus, dividend and reserve

policies, the relation of the corporation to banks and the investing public, and the problems of both trade and economic risk. The course concludes with an analysis of such combinations as trusts, holding companies, consolidations, and pools from both the public and financial points of view.

2 semester hour credits

FI 5 Public Finance

One of the biggest problems confronting the people of all nations today is the question of taxation. In recognition of this fact and of the enormous difficulties facing business organizations and individuals because of the tax burden, the course in Public Finance is offered. This course teaches the kinds of taxes imposed by municipal, state, and federal governing bodies. Attention is given to the "trend" in taxation. Governmental borrowings and revenues are studied as to their general effect on the finances of individuals and business concerns. A large part of the time allowed for this course is spent in a study of the sources of revenue such as commodity taxes, highway taxes, general property taxes, taxes on business, poll taxes, income taxes, and death taxes.

3 semester hour credits

FI 6 Corporation Finance

In this course the principles of finance which have been studied in FI 3 and FI 4 and there applied to small organizations are applied to the medium-sized and large corporation. An exhaustive study is made of all the classes of stocks and bonds, of the problems of promotion and expansion, the selling of new securities, inter-corporate relations, liquidations and reorganizations.

2 semester hour credits

FI 9 Credit Analysis

The prime purpose of this course is to teach the methods of determining the credit worth of a business concern by a study and analysis of financial statements. In addition, such topics are considered as sources of credit information, credit reports, and credit agencies.

2 semester hour credits

FI 11 Public Utility Regulation and Finance

The regulation of business is one of the foremost problems confronting the nation. It is not a new venture wholly. Certain businesses "affected with public interest" have been publicly controlled and supervised over a long period of time because of their unique character. This course presents the administrative,

economic, and legal aspects of public utility regulation. Attention is focused upon the gas, electric, telephone, telegraph, street railway, motor carrier, and water company utilities. Use is made throughout the course of both text and case material in dealing with the various aspects of regulation by the public service commission, regulation by franchise, interstate problems of regulation, municipal regulation, and the relative advantages of public and private ownership.

The course also treats the subjects of valuation and rate-making; the determination of proper rate schedules between different classes of customers and service; the problems of capitalization and security regulation; depreciation; and holding companies.

2 semester hour credits

FI 13 Bank Organization and Administration

This course deals with the organization and administration of the departments of commercial banks. A study is made of banking practices pertaining to internal operation, and inter-bank relations. The functions, rights, and liabilities of the bank, its officers, and employees, are examined in detail.

2 semester hour credits

FI 14 Advanced Banking Problems

In this course students are taught to look at the problems confronting the banker from the executive's point of view. Through a series of problems, most of which are actual cases, the matter of loan and investment policies will be studied at length with other problems concerning methods of increasing the bank's efficiency, volume of business, and profits receiving the proper amount of attention.

2 semester hour credits

FI 15 Investments

This course consists of a review of the principles of investment, a study of investment policies, and the mechanics and mathematics of investments.

2 semester hour credits

FI 16 Investments

A practical study is made of the various fields of investment such as industrials, rails, banks, real estate, government, and foreign investments. The solution of actual problems of current investment interest involving the application of the principles of investment is a feature of the course.

2 semester hour credits

FI 17 Insurance

After a survey of the fundamental principles of insurance, attention is concentrated upon the various types of insurance contracts. Property insurance receives major consideration although life insurance is not neglected. Throughout, the viewpoint of the business man is maintained.

2 semester hour credits

FI 18 Insurance

In order to provide better understanding of the functions of insurance such topics receive attention as rate making, insurance organization, loss adjustment procedure, co-operative organizations in the insurance field, and government regulation of insurance. Insurance coverage planning concludes the course.

2 semester hour credits

Business Management

BU 1 Marketing Principles

This course is designed to acquaint the student with the principles underlying the distribution of merchandise. Textbook assignments and lectures introduce a knowledge of the place of marketing in our modern economic order; the basic structure of markets; the main functions of marketing such as assembling, grading, storing, buying, selling and financing of goods; and the general classification of commodities into major types for the purpose of analytical study. Through this threefold approach, the student is led to an understanding of the functions or processes and the institutions involved in moving goods from producers to consumers.

2 semester hour credits

BU 2 Marketing Principles

Continuing BU 1, this course gives further and more detailed consideration to the activities of the several types of middlemen such as brokers, wholesalers, and retailers, and their utilization as channels of distribution; the work of the commodity exchanges and co-operative marketing associations; and the development of chain stores, mail order houses, and department stores. The trend toward simplification and standardization, and recent steps toward governmental regulation of distribution are also discussed.

Other topics considered are market risk, pricing, selling terms and discounts, hedging, advertising, and the legal aspects of price maintenance. Supplementary lectures and illustrative material will be given to explain in some detail the methods used in marketing several specific commodities.

2 semester hour credits

BU 3 Marketing Problems

Using actual case material this course analyzes and suggests solutions to a wide variety of selling problems in typical industries and trades. It is aimed throughout to develop the analytical powers of the student so that he may decide a problem from the viewpoint of a marketing executive. Consideration is given to consumers' buying habits and buying motives, to the important types of retail and wholesale enterprise, and to an analysis of the channels of distribution with the object of formulating a basis for selecting suitable channels for various products. The marketing of industrial goods is studied including certain special problems such as hedging. Producers' co-operative marketing is also given attention.

2 semester hour credits

BU 4 Marketing Problems

This course continues the work of Marketing Problems BU 3 and deals with a number of advanced problems in this field. Marketing organization is considered especially in respect to merchandising, credit, and service. The fundamental principles involved in the control of sales force are carefully outlined, followed by a discussion of trade marks and brands and the use of selling agents, brokers, and missionary salesmen. A survey is made of price policies including quantity discounts, "trade-in" allowances, installment sales, and resale price maintenance.

2 semester hour credits

IN 5 Industrial Management

The course in industrial management places emphasis on the administrative phases of factory and plant operation. A textbook is used to present elementary principles and problem material which are supplemented by lectures.

The first part of the course deals with the location of the plant; plant design, structure, and plant services; plant layout; standardization, simplification, and specialization; a brief history of United States industry, the public relations of industry and certain aspects of personnel administration.

2 semester hour credits

IN 6 Industrial Management

This course is a continuation of Industrial Management IN 5. It deals with the control of plant operations. Each department of a modern industrial concern is considered, emphasis being placed on the organization and management problems confronted and how they may be handled, with the intention that the student

shall become familiar with the activities and general working of each department and the relationship which the departments hold to one another and to the business as a whole. In detail are considered: budgeting, standards of performance (time and motion study, wage systems), organization, routing, scheduling, dispatching, inventory control, quality control, and visual controls such as the organization chart, planning board, and departmental report. Considerable attention is given to the distribution of overhead expenses and standard costs.

2 semester hour credits

BU 7 Problems in Sales Management

The study of actual case material forms the basis of this course. In each case the facts are analyzed and a solution proposed. The major problems of sales management may be stated as questions: What to sell? To whom shall products be sold? At what price and terms shall products be sold? The answering of these questions involves a consideration of merchandising policies and organization, market channels, market research and analysis, and pricing and credit policies.

4 semester hour credits

BU 8 Problems in Sales Management

Continuing BU 7 Problems in Sales Management this course deals primarily with the following problems: sales methods, sales promotion, sales campaigns, management of sales force, and the planning and control of sales operations.

In the field of sales management the solution of problems involves two types of mental effort. First, there is the suggestion of plans or alternatives, a task requiring imagination; second, there is the choice between the alternatives so suggested, a matter of judgment. It is essential that the student of business management acquire the habit of weighing alternatives before deciding, but much more is to be gained if the student possesses and develops imagination.

The purpose of the courses in Sales Management is principally to develop an approach and technique for the solution of problems, so the student will be able to analyze and think through the problems which must be faced later when he arrives at a post of responsibility.

4 semester hour credits

BU 11 Business Policy

After a survey of the social, geographic and religious factors which influence the conduct of business, attention is turned to the

development of current business policies. The structure and dynamics of modern business receive careful analysis with respect to the determination of fundamental practices of business. Particular emphasis is placed upon the ramifications of judicial interpretation of the Sherman Law.

2 semester hour credits

BU 12 Business Policy

A continuation of BU 11 Business Policy. In this course the ethical features of business policy formation receive major stress. Price policies, such as resale price maintenance, price discrimination, price-cutting, competitive bidding, and such unfair methods of competition as business piracy, misrepresentation, and espionage are studied. The study of self-regulation of business through trade associations and agreements with reference to advertising, cancellation of contracts, limitation of competition, and commercial arbitration concludes the course.

2 semester hour credits

BU 13 Advertising Practices

This course deals with the principles of advertising concerning the planning, co-ordinating and timing of national and local campaigns. Students receive actual practice in writing copy, selecting appeals, and making layouts.

2 semester hour credits

BU 14 Advertising Problems

The analysis and solution of a wide variety of advertising problems and cases based upon the actual business experience of a large number of firms constitutes the content of this course. Model solutions are advanced. Constructive thinking in advertising methods is developed by the student in the same manner by which an advertising executive acquires his technique.

2 semester hour credits

BU 17 Retail Merchandising

The purpose of this course is to study the principles of successful retailing and to solve actual problems involving these principles. Layout, location and equipment of retail stores are first considered. Store organization, market contacts, buying, receiving and marking merchandise, and invoice procedure are taken up next. Mark-up and mark-down are dealt with in detail through practical examples requiring solution by the students, as are inventory and stock control methods. Merchandise planning is discussed and illustrated.

3 semester hour credits

BU 18 Retail Merchandising

This course continues the work of Retail Merchandising, dealing with expense distribution, retail credits and collections, and with special phases of retail accounting. Other topics considered are: fashion, salesmanship, customer service, and the training and welfare of employees. The promotion of sales events and retail advertising practices are analyzed from the viewpoint of the store executive.

3 semester hour credits

IN 11 Methods Engineering

This course comprises a detailed study of time and motion study work, a complete study and actual practice in micromotion which is the use of motion pictures in the motion study work, a preparation of simo-charts (the use of colored charts and symbols called Therbligs which show all the elements in an operation cycle), and the making of process charts which is the use of specifically designed symbols, or industrial shorthand, to record motion analysis.

2 semester hour credits

IN 16 Personnel Administration

A consideration of what modern industry is doing in making an application of science to the obtaining and retaining of an effective and co-operative working force. The student studies thoroughly personnel administration systems now in use including the preparation and use of many forms among which are the occupational description, application, and interview blanks, promotion charts, wage scale, personnel control charts, etc. In addition, such subjects as wage payment plans, profit sharing, the training of workmen, workers' security plans and labor union, and management relationships are given attention.

2 semester hour credits

English

E 1 English I

A course in composition with especial emphasis on exposition. Principles of grammar and rhetoric are reviewed rapidly but thoroughly. Contemporary essays are studied both for their value as models and as enrichment of the student's background. Themes on subjects largely drawn from or related to the student's life and study are a weekly requirement.

3 semester hour credits

E 2 English I

A continuation of E 1. Toward the end of the term a careful study is made of letter writing.

3 semester hour credits

E 3 Contemporary Drama

This course combines advanced work in composition with studies in contemporary drama beginning with Ibsen. Eight plays by American and European dramatists are read and analyzed. Class discussions aim to develop in the student an ability to appreciate literary values. In the assignment and correction of weekly themes, which form the basis of the work in composition, emphasis is laid on effective theme organization and precision in the expression of ideas.

2 semester hour credits

E 4 Contemporary Novel

The novel is studied through an analysis of examples of the various types of contemporary fiction. Outside reading is an important part of the work of the course. Weekly theme writing is continued.

2 semester hour credits

E 13 Effective Speaking

This course offers practical training in the preparation and presentation of the various types of speeches. The instruction will be planned to eliminate defects of voice, posture, etc., and to develop in the student an ability to speak easily, naturally, and forcefully.

1 semester hour credit

E 14 Effective Speaking

Continued practice in oral presentation, impromptu and extempore speaking, organization of material, consideration of the audience, etc., form the basis of the course.

1 semester hour credit

Economics

Ec 1 Introduction to Economics

In order to provide an adequate background for the study of economics this first course emphasizes the economic resources of our country and the part played by these resources in the development of our modern industrial society. The course is more concerned with promoting the comprehension of basic concepts than with stressing encyclopedic knowledge of masses of details.

In the latter part of the semester frequent use is made of motion pictures to illustrate the processes and peculiar economic characteristics of specific industries.

3 semester hour credits

Ec 2 Economic History of the U. S.

This course is designed to complete the factual background which is needed for the most successful study of theoretical economics. The economic development of the United States is traced from the colonial period to the present with special emphasis upon the period since the Civil War. Stress is laid upon the importance of economic factors and changes in our history in the description of the development of manufacturing, agriculture, domestic and foreign commerce, finance and banking, transportation and labor organizations. Consideration is given to European developments which have been closely related to those of the United States.

3 semester hour credits

Ec 3 Economic Principles

A thorough grounding in the fundamental principles and laws of economics is the aim of this basic course. The main topics include: the nature and organization of production, the nature and importance of wants, the relation of money and prices, the process of exchange, and the nature of international trade.

2 semester hour credits

Ec 4 Economic Principles

A continuation of Ec 3. A careful analysis is made of the determination of price under conditions of competition and monopoly, and of the distribution of wealth and income in the form of wages, economic rent, interest, and profits. The elements of insurance are discussed in connection with profits.

2 semester hour credits

Ec 5 Economic Problems

In this course the application of economic principles to some of the major economic problems of modern society is emphasized. The problems studied include consumption, protective tariffs and subsidies, labor problems such as unemployment and labor unions, and the business cycle.

2 semester hour credits

Ec 6 Economic Problems

A continuation of Ec 5 Economic Problems. Among the problems considered are the following: price stabilization, the agricultural problem, the relation of government to business including the control of monopolies and public utilities, insurance, public finance, and proposals for the remodeling and improving of the economic system.

2 semester hour credits

Ec 7 Money and Banking

This course provides a detailed analysis of the functions of money and credit in our economic system. Consideration is given to the nature of money, monetary standards with special reference to the gold standard, the theory of bank credit, the structure of our banking system, and the organization of the American money market.

2 semester hour credits

Ec 8 Money and Banking

A continuation of Ec 7 Money and Banking. This course is devoted to such problems as the quantity theory of money, the control of money and credit by the central bank, the policies of the Federal Reserve Board, and the international aspects of the control of money and credit. Throughout the course special attention is paid to current development in money and banking.

2 semester hour credits

Ec 9 Statistics in Business

This course is intended to give the student an understanding of statistical principles and methods and their practical application in the administration of modern business. A study is made of the nature, sources, collection and organization of business facts; the presentation of such facts in tabular or graphic form, the various averages, measures of dispersion, and the construction and use of index numbers. Laboratory periods provide an opportunity for each student to demonstrate his ability to apply the principles studied.

3½ semester hour credits

Ec 10 Statistics in Business

The analysis of time series occupies the major portion of this continuation of Ec 9 Statistics in Business, and includes the methods of obtaining trends, seasonal indexes, and the measurement of cyclical variation. Correlation of time series is related to the problems of business forecasting. In the laboratory work each student is required to make a complete analysis of an individual time series, preferably associated with his co-operative work.

3½ semester hour credits

History and Government

H 1 History of Civilization

This course is primarily a background course. It consists of a brief outline of the origin of man, palaeolithic and neolithic men and cultures, the transition to copper and bronze cultures, the development of writing and various alphabets, and the early civilizations of Asia, Egypt, Greece and Rome.

3 semester hour credits

H 2 History of Civilization

This course is a continuation of H 1 with an account of the later history of Rome, medieval learning and literature, the Crusades, religious change in Europe, and national cultures and science in the 16th and 17th centuries.

3 semester hour credits

Gv 1A American Government and Politics

The study of our National Government with respect to its organization and function; its powers and limitations under the Constitution; its legislative, administrative and judicial machinery under the party system of government and bureaucracy.

3 semester hour credits

Gv 2A American Government and Politics

A more careful study of the relationships of our federal, state, and municipal governments, including an analysis and comparison of the various state governments and types of municipal government with respect to state and local agencies for carrying out the executive, legislative and judicial functions of government in a democratic country.

3 semester hour credits

Psychology

Ps 1-A Orientation Problems

This course is designed to make the entering student explicitly aware of those facts, principles, and techniques which are significantly related to the maintenance of his intellectual efficiency and mental health in the college environment. Lectures, assigned reading, and individual conferences.

Ps 1 Introduction to Differential Psychology

An elementary survey of the psychology of individual differences including personality differences, together with a presentation of some of the practical applications of the findings of differential psychology.

2 semester hour credits

Ps 2 General Psychology

An introduction to general experimental psychology. The topics considered include learning, thought, memory, perception, and sensation.

2 semester hour credits

Unclassified Courses

PE 2 Hygiene

One class hour a week is devoted to the study of information closely related to the physical training work and to personal and mental hygiene. For each class lecture the student is assigned at least one hour of outside study based on the required textbook. The course includes enough of the fundamentals of physiology and anatomy to enable the student to understand such parts of the course as require some knowledge of these subjects.

1 semester hour credit

PE 3-4 Physical Training

All first-year students are required to take physical training. Health, strength, and vitality do not come by chance, but by constant attention to those factors involved in their development. It is very essential for the student to acquire good habits of life.

The work in the course includes a formal calisthenic program, special exercise classes for the correction of postural defects, participation in the regular athletic program, including baseball, basketball, hockey, track, and many types of informal games. All members of the class are also required to learn to swim.

Students wishing to be excused from physical training, because of physical defects, are required to present a petition to the faculty supported by a physician's certificate.

U 8 Legal Aspects of Business I

The object of law is order, and the result of order is that a man can look ahead with some sort of security as to the future. Without this ability to look ahead with the security as to the future provided by the enforceability of promises the transaction of

present day business would be impossible. We are so accustomed to making future and binding arrangements that we seldom stop to realize that the law of contracts is an essential condition of our modern exchange society.

This course in its entirety is devoted to the study of contracts as they affect the business man. After a preliminary general survey of the field of law, students are introduced to the various classifications of contracts, the nature of offer and acceptance, consideration, capacity of parties, legality, and formality. Consideration of the operation and discharge of contracts completes the course. Decided cases are analyzed.

2 semester hour credits

U 9 Legal Aspects of Business II

This course covers the law of agency and the law of sales as they affect the business man. First is considered the creation of the relation of principal and agent, and the scope of the agent's authority. Then follow the duties and liabilities between principal and agent and their liabilities to third persons. Under the subject of sales, the transfer of title to personal property is dealt with as it affects the rights and liabilities of buyer, seller, and third parties. The course concludes with the methods of terminating the agency relation.

2½ semester hour credits

U 10 Legal Aspects of Business II

This course deals chiefly with the subject of negotiable instruments. The widespread use of credit instruments in commercial transactions demands a knowledge of the law of bills and notes on the part of the business man. The various types of instruments are first discussed, the requirements for negotiability, the negotiation by endorsements of various kinds, the rights of holders in due course, the rights and liabilities of other parties, the requisites for charging secondary parties, and methods of discharge. Brief consideration is given to bailments, suretyship, and guaranty.

2½ semester hour credits

M 21 Business Mathematics

The course in Business Mathematics is intended as a general preparation for the specialized mathematics which appears in the various courses of the different curriculums. This course starts with a thorough review of fractions, decimals, per cent, ratio, proportion, and variation. This is followed by simple interest and discount, exponents, logarithms, progressions, series, and compound interest and discount. The problems used are in the fields of business practice.

3 semester hour credits

M 22 *Business Mathematics*

This is a continuation of M 21. The subjects covered are annuities, sinking funds, amortization, depreciation, bonds, graphs, charts, and use of slide rule. Some work in the mathematics of statistics is introduced near the end of the course.

2 semester hour credits

C 11 *Business Conference*

This course is designed to bring about analytical thinking and systematic planning of the "after-graduation-employment" problem. It is conducted as an open discussion class by the Department of Co-operative Work. Each Co-ordinator has in class those students who have been placed and supervised on co-operative work by him. Each student analyzes and applies to himself as the "product" the fundamental principles of merchandizing. Prominent men who are leaders in the fields of employment counselling, business, or engineering present the employers' viewpoints. Thus the graduating seniors are brought face to face during the year with one of the most important and perplexing problems of life, namely, how to "sell their services," thereby aiming to bring a co-ordinated training of theory and practice to a logical conclusion.

1 semester hour credit

C 12 *Business Conference*

This course is the sequel to C 11 and consists of the practical application of the techniques of job-getting which have been analyzed and discussed in that course. It is conducted on a conference rather than on a class basis, the major portion of the time being devoted to the planning and writing of letters to and securing interviews with prospective employers. It is intended that this course will culminate in the attainment by each student of his after-graduation job.

1 semester hour credit

Business Administration Theses

A thesis in the College of Business Administration is considered to be an essay involving the statement, analysis, and solution of some problem in a special field of business administration. Its purpose is to demonstrate a satisfactory degree of initiative and power of original thought and work on the part of the candidate. A mere resumé of existing knowledge in some subject is not acceptable. This, it is true, must usually be made, but in addition thereto the student must show his ability to deal constructively with the data he has collected and his power to draw significant and reliable conclusions from his investigations. The

completed thesis will be examined for acceptance or rejection from the technical viewpoint by the Professional Departments interested and then forwarded to the Secretary of the Day Division. Final approval of the thesis rests with the Dean. When it is accepted, the thesis becomes the property of the school and it is not to be printed, published, nor in any other way made public except in such manner as the Professional Department and the Dean shall jointly approve.

Theses are not required of seniors in the College of Business Administration. To certain students who wish to do so, however, the privilege of writing a thesis may be granted by the Faculty Committee on Theses in accordance with the following regulations:

1. To be eligible to write a thesis a student must have attained a scholastic average of at least 2.0 or better during his middle year and the first half of his junior year.

2. Students who have met this minimum requirement may petition the Thesis Committee for the privilege of substituting a thesis for any one of the required courses of the fifth year.

3. In his petition the student must state the subject which he proposes to investigate and give a brief statement of the purpose and scope of the proposed thesis.

4. Petitions for the privilege of writing theses must be submitted in writing to the head of the student's Professional Department not later than the middle of the second college period of the junior year.

5. The Committee on Business Administration Theses comprises Dean Wilfred S. Lake, Chairman, Professor Robert Bruce, Professor Julian E. Jackson, and Professor Alfred D'Alessandro.

THE COLLEGE OF ENGINEERING

Requirements for Graduation

CANDIDATES for the Bachelor of Science degree in the College of Engineering must complete all of the prescribed work of the curriculum in which they seek to qualify together with ten additional semester hours of credit in elective subjects of a liberal nature. Elective courses may be chosen from among the offerings of the College of Liberal Arts. This makes a minimum of 145 semester hours required for the degree. A minimum of 125 weeks of college attendance is needed to fulfill this requirement. Students who undertake co-operative work assignments must also meet the requirements of the Department of Co-operative Work before they become eligible for their degrees.

No student transferring from another college or university is eligible to receive the S.B. degree until he has completed at least one academic year at Northeastern immediately preceding his graduation.

Scholarship Requirements

Any student who fails to show a satisfactory standard of general efficiency in his professional field may be required to demonstrate his qualifications for the degree by taking such additional work as the faculty may prescribe. If he is clearly unable to meet the accepted standard of attainment, he may be required to withdraw from the University.

Graduation With Honor

Candidates who have achieved distinctly superior attainment in their academic work will be graduated with honor. Upon special vote of the faculty a limited number of this group may be graduated with high honor. Students must have been in attendance at the University at least two years before they may become eligible for graduation with honor or with high honor.

Thesis Option

Theses are not required of candidates for the degree of Bachelor of Science in the several fields of engineering. Students who show special aptitude for thesis work, however, may be permitted to substitute an appropriate thesis for equivalent work in class. Such permission must be obtained by the candidate from the head of his professional department.

Programs of Study

The College of Engineering offers five-year curricula, conducted on the co-operative plan, leading to the following degrees:

- I Bachelor of Science in Civil Engineering
- II *Bachelor of Science in Mechanical Engineering
- III Bachelor of Science in Electrical Engineering
- IV Bachelor of Science in Chemical Engineering
- V Bachelor of Science in Industrial Engineering
- VI Bachelor of Science in Engineering Administration

The Option in Engineering Administration

Curriculum VI leading to the degree of Bachelor of Science in Engineering Administration has been established by the faculty to meet a growing demand from students whose vocational objectives lie outside of the strictly professional fields of engineering. These students look forward to positions of an administrative, sales, or managerial nature in which an engineering background is needed but for which the advanced and highly technical aspects of the professional curricula are not necessary.

Nature of the Program

The program in Engineering Administration permits students who have completed three years' work in civil, chemical, or electrical engineering curricula to elect courses in accounting, finance, and business management during their junior and senior years, instead of the specialized courses in engineering. Such students maintain the continuity of their educational program by taking one professional course in their own engineering field in each of the last two years, devoting the remainder of their time to courses in accounting, cost finding, statistics, industrial finance, and personnel administration. An outline of the program of studies follows:

*Includes options in Aeronautical Engineering, Air Conditioning Engineering, and Diesel Engineering.

Engineering Administration Option

(Pre-supposes the successful completion of the first three years of the civil, chemical, or electrical engineering curricula, outlined on the following pages of this catalogue.)

Fourth Year

First Term		S.H.	Second Term		S.H.
IN 5	Industrial Mgt.	2	IN 6	Industrial Mgt.	2
IN 7	Industrial Accounting	3	IN 8	Industrial Accounting	3
E 3	Contemporary Drama	2	E 4	Contemporary Novel	2
IN 23	Statistics	2½	IN 24	Statistics	2½
Professional Eng'g Elective		3	Professional Eng'g Elective		3
Choose One:			Choose One:		
I			I		
CI 15	Theory of Structures		CI 16	Theory of Structures	
III			III		
EL 17	Electrical Eng'g III		EL 18	Electrical Eng'g III	
IV			IV		
CH 31	Organic Chem.		CH 32	Organic Chem.	
CH 33	Organic Chem. Lab.		CH 34	Organic Chem. Lab.	
		12½			12½

Fifth Year

C 7	Engineering Conf.	1	C 8	Engineering Conf.	1
IN 9	Cost Accounting	2	IN 10	Cost Accounting	2
IN 11	Methods Engineering	2	IN 18	Sales Eng. Probs.	2
IN 21	Contracts	2	IN 14	Industrial Finance	2
IN 15	Sales Engineering	1½	IN 16	Personnel Adm.	1½
Professional Eng'g Elective		4	Professional Eng'g Elective		4
Choose One:			Choose One:		
I			I		
CI 25	Concrete		CI 26	Concrete	
CI 27	Concrete Design		CI 28	Concrete Design	
III			III		
EL 25	Electrical Eng'g IV		EL 26	Electrical Eng'g IV	
IV			IV		
CH 35	Indus. Organic Chem.		CH 36	Indus. Organic Chem.	
CH 37	Qual. Organic Anal. Lab.		CH 38	Qual. Organic Anal. Lab.	
		12½			12½

CURRICULUM I

Civil Engineering

Civil engineering covers such a broad field that no one can become expert in its whole extent. It includes topographical engineering, municipal engineering, railroad engineering, structural engineering, and hydraulic and sanitary engineering. It covers land surveying, the building of railroads, harbors, docks, and similar structures; the construction of sewers, waterworks, roads and streets; the design and construction of girders, roofs, trusses, bridges, buildings, walls, foundations, and all fixed structures. All of these branches of engineering rest, however, upon a relatively compact body of principles, and in these principles the students are trained by practice in the classroom, in the field, and in the testing laboratory. The curriculum is designed to prepare the young engineer to take up the work of design and construction of structures, to aid in the location and construction of railways and highways, and to undertake intelligently the supervision of work in allied fields of engineering and in general contracting.

The following table sets forth the pre-requisite courses of this department, together with the advanced courses for which they are pre-requisite. Pre-requisite courses must be completed before the advanced courses based upon them may be taken. Advanced courses are tabulated at the left, their pre-requisite to the right.

ADVANCED COURSES	PRE-REQUISITE COURSES
M 5 Differential Calculus ME 20 Applied Mechanics	<i>Second Year</i> M 1 Algebra, M 4 Analytic Geometry P 3 Physics II
ME 22 Strength of Materials CI 7 Curves and Earthwork	<i>Third Year</i> ME 20 Applied Mechanics CI 4 Higher Surveying
CI 15 Theory of Structures ME 23 Strength of Materials CI 18 Structural Drawing CI 21 Sanitary Engineering CI 19 Advanced Surveying	<i>Fourth Year</i> ME 22 Strength of Materials D 2 Graphics CI 12 Hydraulics CI 4 Higher Surveying
CI 23 Engineering Structures CI 25 Concrete CI 29 Structural Design	<i>Fifth Year</i> CI 16 Theory of Structures ME 22 Strength of Materials CI 18 Structural Drawing CI 16 Theory of Structures

I. Civil Engineering

FIRST TERM			SECOND TERM		
Course No.	Course	First Year		Course	Semester Hours
		Semester Hours	Course No.		
E 1	English I	3	E 2	English I	3
M 1	Algebra	3	M 4	Analytic Geometry	5
M 3	Trigonometry	2	PE 2	Hygiene	1
D 1	Graphics I	3	D 2	Graphics II	3
P 1	Physics I	3	P 2	Physics I	3
CH 1	General Chemistry	4	CH 2	Inorganic Chem.	3
PE 3-4	Physical Training	0	PE 3-4	Physical Training	0
PS 1-A	Orientation	0			
		18			18
Second Year					
M 5	Differential Calculus	3	M 6	Integral Calculus	3
P 3	Physics II	2	P 4	Physics II	2
P 5	Physics Laboratory	1	P 6	Physics Laboratory	1
EL 3	Applied Electricity	2	ME 20	Applied Mechanics	3
CI 3	Surveying I	3	CI 4	Surveying II	3
CI 5	Surveying I, F & P	1	CI 6	Surveying II, F & P	1
		12			13
Third Year					
Ec 21	Economics	2	Ec 22	Economics	2
ME 21	Applied Mechanics	3	ME 22	Str. of Mat.	3
ME 35	Heat Engineering	2	ME 68	Mech. Eng. Lab.	1
CI 7	Cur. and Earth. I	2	CI 8	Cur. and Earth. II	2
CI 9	C. & E. I, F. & P.	1	CI 10	C. & E. II, F. & P.	1
CI 13	Materials	1	CI 12	Hydraulics	2
Gy 1	Geology	1½	Gy 2	Geology	1½
		12½			12½
Fourth Year					
E 3	Cont. Drama	2	E 4	Cont. Novel	2
ME 23	Str. of Mat.	3	CI 18	Structural Drawing	2
ME 69	Testing Mat. Lab.	1	ME 70	Testing Mat. Lab.	1
CI 15	Theory Structures	3	CI 16	Theory Structures	3
CI 19	Adv. Surveying	2	CI 20	Highway Eng'g.	2
CI 21	San. Eng. I	2	CI 22	San. Eng. II	2
		13			12
Fifth Year					
C 7	Engineering Conf.	1	C 8	Engineering Conf.	1
IN 5	Industrial Mgt. I	2	IN 6	Industrial Mgt. II	2
CI 23	Engineering Struc.	3	CI 24	Engineering Struc.	3
CI 25	Concrete	2	CI 26	Concrete	2
CI 27	Concrete Design	1½	CI 28	Concrete Design	1½
CI 29	Structural Design	2	CI 30	Structural Design	3
CI 31	Foundations	1			
		12½			12½

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of a liberal character, making a total of 145 semester hours required for the S. B. degree. This work may be taken in an extra 10-week period at college during any upper-class year, or in two summer terms.

SYNOPSSES OF COURSES OFFERED
BY THE
DEPARTMENT OF CIVIL ENGINEERING

Courses offered in the first term bear odd numbers; those offered in the second term bear even numbers.

CI 3 Surveying I

The course is divided into two portions, the first of which treats of basic principles such as taping, theory of the transit and use of the transit, theory of the level, care of the level and use of the level.

The second portion deals with closed and random traverses, both the D.M.D. and the co-ordinate methods being used. Particular stress is laid upon having the student use the methods and procedures as outlined by the Massachusetts Land Court.

3 semester hour credits

CI 4 Surveying II

The course consists of lectures and problem work in plane triangulation, double rodded levels, Coast and Geodetic leveling. The theory of the stadia and plane table is presented with their applications to topographic surveying. The theory of the sextant is also presented and its application to problems in hydrographic surveying.

3 semester hour credits

CI 5 Surveying I F. & P.

The course is divided into two equal parts; the first part is devoted entirely to field work, while the second part is devoted entirely to office, or plotting work.

In the field an accurate tape and transit closed traverse is run. The angles are read by repetition. The distances are taped and each traverse point is carefully tied in. The aim is to obtain data for a closed traverse equal to or better than a Class A survey as set forth by the Massachusetts Land Court. Physical features are located from this traverse. The best methods and procedures of taking field notes are emphasized at all times.

In the drafting room the student is required to compute his closed traverse by both the D.M.D. and rectangular co-ordinate methods, submit an original drawing showing the traverse and physical features, and a tracing of the same, emphasis being placed upon such points as lettering, appearance, and title.

1 semester hour credit

CI 6 *Surveying II F. & P.*

Like course number CI 5, this course is divided equally into two portions, one consisting of field work, the other of drafting room work.

The field work is triangulation, including base line and measurement of angles by repetition with precise transits or theodolite. A complete plane table map is drawn locating physical features and contours. Some of the more elementary plane table problems such as intersection, resection, and three point problems are taken up. Precise and Coast and Geodetic leveling are also considered.

The drafting room work consists of the preparation of a topographic map based on computations of the triangulation systems, together with a tracing of the same; also the solving of such problems as the eccentric and the three-point problem (analytic solution).

1 semester hour credit

CI 7 *Curves and Earthwork I*

The principles of reconnaissance, preliminary, and location surveys, as applied to highway and railroad surveying, are used as an introduction for this course. These are followed by the principles and application of simple, compound, reversed, and vertical curves. Throughout the course, both the railroad curve and the circular arc are used. Many of the more difficult or complex problems are solved by the use of rectangular co-ordinates giving a continuation of the co-ordinate method as taught in Surveying I.

2 semester hour credits

CI 8 *Curves and Earthwork II*

This course is a continuation of CI 7, Curves and Earthwork. The various field procedures and methods of computation for taking cross sections are studied. Both the average end area method of computing volumes and the prismoidal formulae are taught. The principles and methods used in balancing volumes and constructing and solving mass diagrams are presented.

The spiral or transition curve as applied to railroad and highway location is taken up. In the latter part of this course the fundamentals of railroad track problems are presented.

2 semester hour credits

CI 9 *Curves and Earthwork I F. & P.*

A reconnaissance line is studied, and from this a preliminary center line in the form of a random traverse is run. From this preliminary line all the physical features several hundred feet each

side of the center line are located. A map is then prepared showing these data. From this map suitable curves are computed and the location of the center line thus determined is staked out in the field.

1 semester hour credit

CI 10 Curves and Earthwork II F. & P.

This is a continuation of course CI 9. A profile of the center line is run and from this a suitable sub-grade profile of this line is obtained. Further field work is undertaken to obtain a complete set of cross section notes for the whole line, and special emphasis on field notes is made throughout the course.

In the drafting room the volumes and balanced volumes are computed. From these a mass diagram is prepared and a complete earthwork solution is solved by use of the mass diagram and the profile.

1 semester hour credit

CI 12 Hydraulics

The course, which opens with the laws of hydrostatics, treats of gages, and the amount and points of application of the center of pressures on submerged surfaces. The laws of hydrokinetics, including those of the flow of liquids through orifices, short tubes, weirs, pipe lines, and open channels are studied with particular reference to Bernoulli's theorem. The principles of hydrodynamics are taken up. A short practical study is made of types of hydraulic apparatus including the current meter, Venturi meter, pumps and turbines.

2 semester hour credits

CI 13 Materials

A detailed study is made of the methods of manufacturing, properties, and uses of materials used in engineering work, such as iron, steel, lime, cement, concrete, brick, wood, and stone. Methods of testing and strength of various materials used by the engineer are also taken up. Each student is required to prepare a paper on some subject of especial importance which is assigned by the instructor.

1 semester hour credit

CI 15 Theory of Structures

The course comprises lectures and recitation work in the study of the loads, reactions, shears, and moments acting upon statically determinate structures of various kinds such as roofs and bridges. A complete and thorough presentation of the usual methods of determining bar stresses in simple trusses is also undertaken.

All of the foregoing studies are covered in detail by both algebraic and graphic methods.

3 semester hour credits

CI 16 *Theory of Structures*

A complete study of the function of influence lines in determining the shears, moments, and stresses produced in various types of simple structures by moving load systems both distributed and concentrated. Methods of providing for impact stresses in structures are discussed and analyzed. The material given in CI 15 and also in this course is then summarized by the solution of problems determining the design stresses for several types of bridge structures.

3 semester hour credits

CI 18 *Structural Drawing*

This course consists of the drawing of standard sections of structural steel shapes and connections, and the preparation of drawings representing elementary structural details. The course is designed to familiarize the student with the drawing, dimensioning, and detailing of structural parts.

2 semester hour credits

CI 19 *Advanced Surveying*

The course covers the theory underlying the use of the sextant and transit in solving astronomical surveying problems in azimuth and time. It also includes aerial surveying and map projection. Computations in geodetic triangulation are made including the conversion of geodetic to rectangular co-ordinates.

2 semester hour credits

CI 20 *Highway Engineering*

In this course are taken up the location, construction, and maintenance of roads, street design, and street drainage; sidewalks; pavement foundations; and the construction, cost and maintenance of the various kinds of roads and pavements, including asphalt, brick, stone-block, wood-block, macadam (both water bound and bituminous), bituminous concrete, Portland Cement concrete, gravel and earth. Special consideration is given to the modern concrete road.

2 semester hour credits

CI 21 *Sanitary Engineering I*

The course is designed primarily to be a lecture course supplemented by problems involving the following items of water supply engineering; the collection and assimilation of rainfall data; the methods of collection and storage for ground water or surface waters; the preparation of a dam site and the elements of design as applied to masonry and earth filled dams; methods of

distributing water for domestic use, manufacturing, and for fire fighting; treatment of water for hardness; treatments of water to provide a palatable and safe water supply free from contamination. Consideration is given also to present day activities in regard to the improvement of water supply apparatus; with special emphasis upon costs of installation, cost of apparatus, and total cost as applied to water supply engineering.

2 semester hour credits

CI 22 Sanitary Engineering II

This is a companion course to CI 21, Sanitary Engineering I. It deals with the collection and disposal of sewage and storm water, including the following items; the quantity of sewage to be collected; the sewerage collection systems for either a separate or a combined system; the surveying and the collection of data in order to prepare plans for the design and the construction of the collection system; and a thorough discussion of the modern methods of treating the sewage and the operation of the sewerage disposal plants.

2 semester hour credits

CI 23 Engineering Structures

The work begins with the design of bridge trusses having secondary web systems (including Baltimore and Petit trusses) and trusses with multiple web systems, lateral and portal bracing, transverse bents, viaduct towers and cantilever bridges.

A study is made of slope and deflection with emphasis on the methods of "Moment Area" and "Elastic Weights." The graphical solution of deflections as illustrated by the Williot-Mohr diagram is studied.

3 semester hour credits

CI 24 Engineering Structures

The course consists of the study of rigid frames and continuous beams. All the customary methods are discussed, including the Three Moment Equation, Least Work, Slope Deflection, and Moment Distribution. The solution of statically indeterminate problems in continuous beams is obtained by algebraic and graphical methods.

3 semester hour credits

CI 25 Concrete

Concrete as a material of construction is studied in detail, and the principles of reinforced concrete design are learned. Computations and designs are made of rectangular beams, T beams, and girders.

2 semester hour credits

CI 26 Concrete

This course, a continuation of CI 25, covers the design of reinforced concrete columns, footings, retaining walls, and arches.

2 semester hour credits

CI 27 Concrete Design

This course consists of the detailing and making of complete working drawings of the elements of design studied in CI 25, as applied to the design of a reinforced concrete factory building.

1½ semester hour credits

CI 28 Concrete Design

The design of the typical floor system of the building referred to in CI 27 is completed and drawn up together with similar drawings of typical columns and footings.

1½ semester hour credits

CI 29 Structural Design

The work consists of the design of a single track railroad bridge of the through plate girder type. The problem is taken complete in all detail covering design of section, rivet spacing, web and end stiffeners, various methods of web splicing and their design, end bearings, lateral bracing, and so forth.

2 semester hour credits

CI 30 Structural Design

A general drawing of the problem designed in CI 29 with completely developed details covering arrangement of rivets, stiffeners, splices, and so forth.

3 semester hour credits

CI 31 Foundations

The subjects treated are sub-surface explorations, pile foundations (including those of timber and concrete), sheet piles, coffer-dams, box and open caissons, pneumatic caissons, pier foundations in open wells, and bridge piers.

1 semester hour credit

CURRICULUM II

Mechanical Engineering

The program of instruction is designed to give the student a broad foundation in those fundamental subjects which form the basis for all professional engineering practice, and especially to equip the young engineer with a knowledge of the various phases of mechanical engineering. The curriculum embraces instruction by textbook, lecture, laboratory, and designing room practice, and is planned definitely to develop the student's initiative and instill accuracy. All courses are prescribed for the first three years, but beginning with the junior year, students may specialize to a limited degree in aeronautical engineering, air conditioning engineering, or Diesel engineering. All programs lead to the degree of Bachelor of Science in Mechanical Engineering.

The following table sets forth the pre-requisite courses of the mechanical engineering curriculum, together with the advanced courses for which they are pre-requisite. Pre-requisite courses must be completed before the advanced courses based upon them may be taken. Advanced courses are tabulated at the left, their pre-requisite to the right.

ADVANCED COURSES	PRE-REQUISITE COURSES
	<i>Second Year</i>
M 5 Differential Calculus	M 1 Algebra, M 4 Analytic Geometry
ME 20 Applied Mechanics	P 3 Physics II
	<i>Third Year</i>
ME 22 Strength of Materials	ME 20 Applied Mechanics
	<i>Fourth Year</i>
ME 23 Strength of Materials	ME 22 Strength of Materials
ME 24 Advanced Mechanics	ME 23 Strength of Materials
ME 31 Heat Engineering	ME 30 Thermodynamics
	<i>Fifth Year</i>
ME 51 Machine Design	ME 23 Strength of Materials
ME 15 Industrial Plants	ME 23 Strength of Materials
ME 44 Power Plant Engineering	{ ME 32 Heat Engineering
ME 74 Aircraft Structures	{ ME 40 Power Plant Equipment
ME 77 Aircraft Engine Des.	ME 73 Aircraft Structures
ME 37 Adv. Diesel Engines	ME 62A Aircraft Engine Lab.
ME 51C Diesel Engine Des.	ME 13C Diesel Engine Principles
	ME 62C Diesel Engine Lab.

II. Mechanical Engineering

FIRST TERM			SECOND TERM		
Course Number	Course	Semester Hours	Course Number	Course	Semester Hours
E 1	English I	3	E 2	English I	3
M 1	Algebra	3	M 4	Analytic geometry	5
M 3	Trigonometry	2	PE 2	Hygiene	1
D 1	Graphics I	3	D 2	Graphics II	3
P 1	Physics I	3	P 2	Physics I	3
CH 1	General Chemistry	4	CH 2	Inorganic Chemistry	3
PE 3-4	Physical Training	0	PE 3-4	Physical Training	0
PS 1-A	Orientation	0			
		18			18
Second Year					
M 5	Differential Calculus	3	M 6	Integral Calculus	3
P 3	Physics II	2	P 4	Physics II	2
P 5	Physics Laboratory	1	P 6	Physics Laboratory	1
EL 5	Electrical Mach.	4	ME 20	Applied Mechanics	3
IN 3	Prod. Processes I	2½	IN 4	Prod. Processes II	1½
			D 4	Machine Drawing	2
		12½			12½
Third Year					
Ec 21	Economics	2	Ec 22	Economics	2
CI 13	Materials	1	CI 12	Hydraulics	2
ME 1	Mechanism	3	EL 6	Electrical Meas.	2½
ME 21	Applied Mechanics	3	ME 22	Str. of Mat.	3
ME 27	Metallography	2½	ME 30	Thermodynamics	2
ME 13	Internal Com. Eng.	1	ME 40	Power Plant Equip.	1
		12½			12½
Fourth Year					
E 3	Cont. Drama	2	E 4	Cont. Novel	2
IN 5	Industrial Mgt.	2	IN 6	Industrial Mgt.	2
ME 3	Mech. of Machines	2	ME 42	Heat. and Air Cond.	2
ME 23	Str. of Mat.	3	ME 24	Adv. Mechanics	3
ME 31	Heat Engineering	2	ME 32	Heat Engineering	2
ME 61	Mech. Eng. Lab.	1½	ME 62	Mech. Eng. Lab.	1½
		12½			12½
Fifth Year					
C 7	Engineering Conf.	1	C 8	Engineering Conf.	1
ME 15	Industrial Plants	4	ME 16	Industrial Plants	4
ME 33	Refrigeration	2	ME 34	Steam Turbines	2
ME 51	Machine Design	3	ME 52	Machine Design	3
ME 63	Mech. Eng. Lab.	2½	ME 44	Power Plant Eng.	2½
		12½			12½

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of a liberal character, making a total of 145 semester hours required for the S.B. degree. This work may be taken in an extra 10-week period at college during any upper-class year, or in two summer terms.

II-A. Mechanical Engineering (Aeronautical Option)

FIRST TERM			First Year		SECOND TERM	
Course Number	Course	Semester Hours	Course Number	Course	Semester Hours	
E 1	English I	3	E 2	English I	3	
M 1	Algebra	3	M 4	Analytic Geometry	5	
M 3	Trigonometry	2	PE 2	Hygiene	1	
D 1	Graphics I	3	D 2	Graphics II	3	
P 1	Physics I	3	P 2	Physics I	3	
CH 1	General Chemistry	4	CH 2	Inorganic Chemistry	3	
PE 3-4	Physical Training	0	PE 3-4	Physical Training	0	
PS 1-A	Orientation	0				
		18			18	

Second Year					
M 5	Differential Calculus	3	M 6	Integral Calculus	3
P 3	Physics II	2	P 4	Physics II	2
P 5	Physics Laboratory	1	P 6	Physics Laboratory	1
EL 5	Electrical Mach.	4	ME 20	Applied Mechanics	3
IN 3	Prod. Processes I	2½	IN 4	Prod. Processes II	1½
			D 4	Machine Drawing	2
		12½			12½

Third Year					
Ec 21	Economics	2	Ec 22	Economics	2
CI 13	Materials	1	CI 12	Hydraulics	2
ME 1	Mechanism	3	EL 6	Elec. Measurements	2½
ME 13	Internal Comb. Eng.	1	ME 40	Power Plant Equip.	1
ME 21	Applied Mechanics	3	ME 22	Str. of Mat.	3
ME 27	Metallography	2½	ME 30	Thermodynamics	2
		12½			12½

Fourth Year					
E 3	Cont. Drama	2	E 4	Cont. Novel	2
ME 3	Mech. of Machines	2	ME 42	Heat. and Air Cond.	2
ME 23	Str. of Materials	3	ME 24	Adv. Mechanics	3
ME 31	Heat Engineering	2	ME 32	Heat Engineering	2
ME 61-A	Aircraft Eng. Lab.	1½	ME 62-A	Aircraft Eng. Lab.	1½
IN 5	Industrial Mgt.	2	IN 6	Industrial Mgt.	2
		12½			12½

Fifth Year					
C 7	Engineer. Conf.	1	C 8	Engineer. Conf.	1
ME 73	Aircraft Structures	4	ME 74	Aircraft Structures	4
ME 75	Aircraft Design	3½	ME 76	Aircraft Design	3½
ME 77	Aircraft Eng. Design	4	ME 78	Aircraft Eng. Design	4
		12½			12½

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of a liberal character, making a total of 145 semester hours required for the S.B. degree. This work may be taken in an extra 10-week period at college during any upperclass year, or in two summer terms.

*II-B. Mechanical Engineering (Air Conditioning Option)**First Year*

FIRST TERM			SECOND TERM		
Course Number	Course	Semester Hours	Course Number	Course	Semester Hours
E 1	English I	3	E 2	English I	3
M 1	Algebra	3	M 4	Analytic Geometry	5
M 3	Trigonometry	2	PE 2	Hygiene	1
D 1	Graphics I	3	D 2	Graphics II	3
P 1	Physics I	3	P 2	Physics I	3
CH 1	General Chemistry	4	CH 2	Inorganic Chemistry	3
PE 3-4	Physical Training	0	PE 3-4	Physical Training	0
PS 1-A	Orientation	0			
		18			18

Second Year

M 5	Differential Calculus	3	M 6	Integral Calculus	3
P 3	Physics II	2	P 4	Physics II	2
P 5	Physics Laboratory	1	P 6	Physics Laboratory	1
EL 5	Electrical Mach.	4	ME 20	Applied Mechanics	3
IN 3	Prod. Processes I	2½	IN 4	Prod. Processes II	1½
			D 4	Machine Drawing	2
		12½			12½

Third Year

Ec 21	Economics	2	Ec 22	Economics	2
CI 13	Materials	1	CI 12	Hydraulics	2
ME 1	Mechanism	3	EL 6	Elec. Measurements	2½
ME 21	Applied Mechanics	3	ME 22	Str. of Materials	3
ME 27	Metallography	2½	ME 30	Thermodynamics	2
ME 13	Internal Comb. Eng.	1	ME 40	Power Plant Equip.	1
		12½			12½

Fourth Year

E 3	Cont. Drama	2	E 4	Cont. Novel	2
IN 5	Industrial Mgt.	2	IN 6	Industrial Mgt.	2
ME 3	Mech. of Machines	2	ME 42	Heat. and Air Cond.	2
ME 23	Str. of Materials	3	ME 24	Advanced Mech.	3
ME 31	Heat Engineering	2	ME 32	Heat Engineering	2
ME 61-B	Air Cond. Lab.	1½	ME 62-B	Air Cond. Lab.	1½
		12½			12½

Fifth Year

C 7	Engineer. Conf.	1	C 8	Engineer. Cont.	1
ME 15	Industrial Plants	4	ME 16	Industrial Plants	4
ME 33	Refrigeration	2	ME 36	Adv. Refrigeration	2
ME 51-B	Air Cond. Design	3	ME 52-B	Air Cond. Design	3
ME 63-B	Refrig. Eng. Lab.	2½	ME 44	Power Plant Eng.	2½
		12½			12½

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of a liberal character, making a total of 145 semester hours required for the S.B. degree. This work may be taken in an extra 10-week period at college during any upper-class year, or in two summer terms.

II-C. Mechanical Engineering (Diesel Option)

First Year

FIRST TERM			SECOND TERM		
Course Number	Course	Semester Hours	Course Number	Course	Semester Hours
E 1	English I	3	E 2	English I	3
M 1	Algebra	3	M 4	Analytic Geometry	5
M 3	Trigonometry	2	PE 2	Hygiene	1
D 1	Graphics I	3	D 2	Graphics II	3
P 1	Physics I	3	P 2	Physics I	3
CH 1	General Chemistry	4	CH 2	Inorganic Chemistry	3
PE 3-4	Physical Training	0	PE 3-4	Physical Training	0
PS 1-A	Orientation	0			
		18			18

Second Year

M 5	Differential Calculus	3	M 6	Integral Calculus	3
P 3	Physics II	2	P 4	Physics II	2
P 5	Physics Laboratory	1	P 6	Physics Laboratory	1
EL 5	Electrical Machinery	4	ME 20	Applied Mechanics	3
IN 3	Prod. Processes I	2½	IN 4	Prod. Processes II	1½
			D 4	Machine Drawing	2
		12½			12½

Third Year

Ec 21	Economics	2	Ec 22	Economics	2
CI 13	Materials	1	CI 12	Hydraulics	2
ME 1	Mechanism	3	EL 6	Elec. Measurements	2½
ME 21	Applied Mechanics	3	ME 22	Str. of Materials	3
ME 27	Metallography	2½	ME 30	Thermodynamics	2
ME 13-C	Diesel Eng. Prins.	1	ME 40	Power Plant Equip.	1
		12½			12½

Fourth Year

E 3	Cont. Drama	2	E 4	Cont. Novel	2
IN 5	Industrial Mgt.	2	IN 6	Industrial Mgt.	2
ME 3	Mech. of Machines	2	ME 42	Heat. & Air Cond.	2
ME 23	Strength of Materials	3	ME 24	Adv. Mechanics	3
ME 31	Heat Engineering	2	ME 32	Heat Engineering	2
ME 61-C	Diesel Engine Lab.	1½	ME 62-C	Diesel Engine Lab.	1½
		12½			12½

Fifth Year

C 7	Engineering Conf.	1	C 8	Engineering Conf.	1
ME 15	Industrial Plants	4	ME 16	Industrial Plants	4
ME 37	Adv. Diesel Eng.	2	ME 38	Diesel Installations	2
ME 51-C	Diesel Engine Design	3	ME 52-C	Diesel Engine Design	3
ME 63-C	Diesel Eng. Lab.	2½	ME 44	Power Plant Eng.	2½
		12½			12½

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of a liberal character, making a total of 145 semester hours required for the S.B. degree. This work may be taken in an extra 10-week period at college during any upper-class year, or in two summer terms.

SYNOPSIS OF COURSES OFFERED
BY THE
DEPARTMENT OF MECHANICAL ENGINEERING

Courses offered in the first term bear odd numbers; those offered in the second term bear even numbers.

ME 1 Mechanism

This course deals mainly with a mathematical solution of problems involving angular and linear velocities and gear trains. It embraces a careful study of paths of mechanical movements and their application to velocity diagrams, quick-return mechanisms, and cams. The theory of gear tooth outlines is also investigated by graphical methods.

3 semester hour credits

ME 3 Mechanism of Machines

This course is designed to supplement the work in pure mechanism as covered in the course in Mechanism ME 1. The application of mechanisms to actual machines will be considered, so that the student may have a knowledge of a series of practical mechanisms adapted to carrying out special purposes and so that he may thereby increase his ability to analyze the action of other machines. During the course the student is required to solve a number of problems in which the principles discussed are applied to various machine tools.

2 semester hour credits

ME 13 Internal Combustion Engines

The various types of modern internal combustion engines are taken up in detail, including the latest designs of automobile, airplane, and Diesel engines.

Considerable stress is placed on the Diesel engine; and the advantages of the high speed, medium speed, and low speed types, two cycle and four cycle designs, solid and air injection Diesels in their respective fields are discussed.

1 semester hour credit

ME 13-C. Diesel Engine Principles

Analysis of the internal engine cycles based on the air cycle as well as the analysis with variable specific heats. The different types of Diesel engines are discussed and the methods of fuel injection are studied for each type.

1 semester hour credit

ME 15 *Industrial Plants*

The principles involved in the erection, installation, and management of an industrial plant are studied in this course. Various types of structures are described, with attention to such details as foundations, walls, columns, floors, windows, and so forth; and the calculations and layout for a typical mill are discussed. This material is followed by a problem on the calculation and layout of a machine shop, including power requirements and placement of machines, with special consideration to the best conditions for maximum production and the most effective routing of a given product.

4 semester hour credits

ME 16 *Industrial Plants*

This course, a continuation of ME 15, includes a problem on the heating and air-conditioning of a building, and a design problem on the calculation and layout of a power plant. Sizes of equipment, costs of power generation, and various operating practices are discussed and worked out. The later problems of the course have to do with the layout of the power plant previously figured.

4 semester hour credits

ME 20 *Applied Mechanics (Statics)*

The subjects treated are collinear, parallel, concurrent, and non-concurrent force systems in a plane and in space; the determination of the resultant of such systems by both algebraic and graphical means, special emphasis being placed on the string polygon method for coplanar force systems; the forces required to produce equilibrium in such systems; first moments; and problems involving static friction, such as the inclined plane and the wedge.

3 semester hour credits

ME 21 *Applied Mechanics (Kinetics)*

The subjects treated are continuation of first moments as applied to varying intensity of force and to the determination of center of gravities of areas and solids; second moments and the application to the determination of moment of inertia of plane and solid figures, radius of gyration, polar moment of inertia; product of inertia principal axes, uniform motion, uniformly accelerated motion, variable accelerated motion, harmonic motion, simple pendulum, rotation, plane motion, work, energy, momentum and impact.

3 semester hour credits

ME 22 *Strength of Materials*

The topics covered in this course are physical properties of materials, stresses in thin hollow cylinders and spheres, riveted connections of the structural and continuous plate type, welded connections, and beams; covering shearing force and bending moment with stress analysis due to these effects and the design of beams for both conditions.

3 semester hour credits

ME 23 *Strength of Materials*

This is a continuation of ME 22 covering deflection of beams by the double integration method; stresses and strains in shafting due to torsion, angle of twist; horsepower; combined axial and bending loads, eccentric loads; compression members or columns by Euler's column formula, and by those of the Gordon-Rankine parabolic and straight line type.

3 semester hour credits

ME 24 *Advanced Mechanics*

Advanced problems in the strength of materials and dynamics are treated. Among the subjects under discussion are non-symmetrical bending, curved bars, flat plates, thick hollow cylinders, dynamical stresses in machine parts, and allied subjects leading to the more advanced applications of mechanics in machine design, the elastic theory, and photoelasticity.

3 semester hour credits

ME 27 *Metallography*

The course in metallography is intended to show the student the relation between the crystalline structure of metals and their physical properties.

The theory of crystallization and the equilibrium diagram are studied. Specimens of metal of known composition are studied by use of the metallographic microscope and their physical properties compared. The effect of heat treatment on the crystalline structure is noted.

2½ semester hour credits

ME 30 *Thermodynamics*

In this introductory course in the fundamentals of thermodynamics the following subjects are discussed: general theory of heat and matter; first and second laws of thermodynamics; equations of state; fundamental equations of thermodynamics; laws of perfect gases; properties of vapors including development and use of tables and charts; thermodynamic processes of gases, and saturated and superheated vapors; and the general equations for the flow of fluids.

2 semester hour credits

ME 31 *Heat Engineering*

The principles of thermodynamics are applied, in this course, to various engineering problems. The fundamental laws governing flow of gases and vapors through nozzles and orifices; the theory of vapor engines, including a discussion of the Rankine, the re-heating, the regenerative and the binary vapor cycles; the efficiencies and power calculations for actual steam engines; and the efficiencies and power requirements of single and multi-staged air compressors are the major subjects treated.

2 semester hour credits

ME 32 *Heat Engineering*

This course is a continuation of the applications of the principles of thermodynamics to engineering problems. The subjects discussed are hot air and internal combustion engines; fuels and combustion, including a complete heat balance of a boiler plant; gas and vapor mixtures; and the principles of heat transfer as applied to steady flow conditions.

2 semester hour credits

ME 33 *Refrigeration*

A discussion is given of the history, theory, equipment, and applications of refrigeration. The properties and hazards of the various refrigerants; the simple and compound compression cycle; the absorption system; the jet or vapor system; devices for improving theoretical and operating performance of machines are among the topics considered.

2 semester hour credits

ME 34 *Steam Turbines*

A study is first made of the flow of steam through nozzles, dynamic action of jets on moving blades, and other elements in the design of a steam turbine. This material is followed by a consideration of the various types of turbines, their governing mechanisms, condensing equipment, and other constructional details.

2 semester hour credits

ME 35 *Heat Engineering*

This is a short course covering the elements of thermodynamics and affording a general discussion of modern power plant equipment. Some typical calculations are made in regard to apparatus, but the course is mainly descriptive.

2 semester hour credits

ME 36 *Advanced Refrigeration*

This course is a continuation of course ME 33 dealing primarily with the applications of refrigeration, transportation and storage of foods, and the layout of typical refrigeration plants.

2 semester hour credits

ME 37 *Advanced Diesel Engines*

Methods of balancing and the analysis of vibrations in Diesel engines are among the important subjects taken up in this course.

2 semester hour credits

ME 38 *Diesel Installation*

A study of the problems involved in the selection of suitable units for each installation.

2 semester hour credits

ME 40 *Power Plant Equipment*

The course is largely a description of the many appliances used in modern power plants. There is also taken up a discussion of boilers and boiler accessories, ash and coal handling systems, the various types of engines with their valve gears and governing devices, condensers, feed-water heaters, pumps, etc.

1 semester hour credit

ME 42 *Heating and Air Conditioning*

The most important methods of heating and air conditioning various types of buildings are studied in this course. The principles of heat transfer and air flow are reviewed, and the application of them in the various systems is brought out through lectures and problems.

2 semester hour credits

ME 44 *Power Plant Engineering*

This course consists of topics and problems chosen largely from engineering practice selected to convey to the engineering students a firm grasp of fundamental principles and engineering methods of attacking and analyzing problems in power plant, not only from the point of view of scientific theory, but also with due consideration of the limitations imposed by practice and by costs. Efficiency and operating costs of different types of plants such as steam, hydro-electric, and Diesel engines are also carefully studied to determine the type of plant best suited for the conditions and location involved.

2½ semester hour credits

ME 51 Machine Design

Further practice is given the student in the application of theoretical principles previously studied, and at the same time he becomes familiar with the many practical details which must be considered in design work. The problems taken up in the early part of the course are of a static nature, while the later problems involve dynamical stresses. The problems vary from year to year, but the following are typical of the designs taken up; hydraulic press, arbor press, hydraulic flanging clamp, crane, air compressor, punch and shear, stone-crusher, and so forth.

In each design, the construction details are carefully considered, with special attention to methods of manufacture, provision for wear, lubrication, and so forth. The work is based on rational rather than empirical methods, the student being required to make all calculations for determining the sizes of the various parts and all necessary working drawings.

3 semester hour credits

ME 51-B Air Conditioning Design

A particular building will be taken as a class problem for heating and air conditioning. Various systems will be discussed with their application to the building in question. A layout of piping and duct system will be made together with complete calculations and estimation of cost. An investigation and study of existing plants around the city will be made with trips to these plants whenever possible in order to bring out the practical problems involved in the design.

3 semester hour credits

ME 51-C Diesel Engine Design

This course consists of a layout problem in which an engine is designed to develop a definite horse power and in which the stresses in the various parts of the engine are analyzed.

3 semester hour credits

ME 52 Machine Design

This course comprises a continuation of Machine Design ME 51 with special reference to designs involving dynamical stresses. A thorough discussion of the principles and methods of lubrication forms a part of the course.

3 semester hour credits

ME 52-B *Air Conditioning Design*

This course is a continuation of ME 51-B, and will be an application of the principles brought out and discussed in ME 42 on heating and air conditioning.

3 semester hour credits

ME 52-C *Diesel Engine Design*

This course comprises a problem similar to ME 51-C, but with different specifications.

3 semester hour credits

ME 61 *Mechanical Engineering Laboratory*

This course comprises a preliminary series of experiments upon various apparatus used in modern power plants, to illustrate under actual conditions the principles developed in Thermodynamics ME 30. These exercises are a preparation for more complete tests to be run during the following semester.

The knowledge they have gained in the classroom, the students here apply in actual tests, and make a complete report of these experiments, including methods of testing and calculations. The following experiments are illustrative of the type of work taken up; calibration of gages, indicator practice, plain slide valve setting, test on steam calorimeters, flow of steam through orifices, steam injector test, weir calibration, and tests on friction of drives.

1½ semester hour credits

ME 61-A *Aircraft Engine Laboratory*

This course consists of preliminary experiments on calibration of gages and laboratory exercises devoted to various aeronautical and meteorological instruments such as transients in mechanical systems, mechanical vibrations, magnetic compasses, gyroscopic instruments, barometric altimeters, rate of climb meters, recording thermometers, and humidity instruments. Airplane engines are taken apart and assembled in order to gain a knowledge of the construction and principles of mechanisms involved in their operation.

1½ semester hour credits

ME 61-B *Air Conditioning Laboratory*

This course is very similar to ME 61 and is to acquaint the student with the application of the principles developed in ME 30 and ME 31. The experiments are a preparation for more complete tests to be run on heating, ventilating, and air conditioning apparatus during the following semester.

1½ semester hour credits

ME 61-C Diesel Engine Laboratory

This course includes a preliminary series of experiments on various apparatus used in modern power plants using Diesel power to illustrate under actual conditions the principles developed in ME 30 on thermodynamics. These tests are in preparation for more complete experiments to be conducted during the following semester. The students here apply in actual tests the knowledge they have acquired in the classroom, and make complete reports of these experiments including methods of testing and calculations.

1½ semester hour credits

ME 62 Mechanical Engineering Laboratory

This course consists of a series of tests on various types of power plant equipment, more complete than those made in ME 61. Among the pieces of apparatus tested are the following: steam engine, gasoline engine, air compressor, triplex power pump, steam pulsometer, rotary power pump, Pelton water wheel, centrifugal pumps, Ford gasoline engine, Warren steam pump, and steam turbine. Experiments are also made in flow of water measurements and flow of air.

A complete report is made on each test, describing the machine tested, explaining how the test is made, and giving the results, in accordance with the A.S.M.E. Power Test Codes.

1½ semester hour credits

ME 62-A Aircraft Engine Laboratory

A continuation of course ME 61-A with work on such airplane engines as a Pratt and Whitney Wasp 450 H.P. engine consisting of nine radial cylinders, a Curtis airplane engine, and other types. Various kinds of magnetos, carburetors, tachometers, etc., are studied and discussed.

1½ semester hour credits

ME 62-B Air Conditioning Laboratory

This course consists of a series of tests on various types of air conditioning and heating apparatus. These tests are more complete than those made in ME 61-B. Among the pieces of apparatus tested are the following: air blower; unit heater; carrier air conditioner provided for humidification or dehumidification; hot air furnace equipped with oil burner, humidifier, blower, and air filters; and also automatic controls and a special insulated constant temperature room for the study of problems in heating and air conditioning.

1½ semester hour credits

ME 62-C *Diesel Engine Laboratory*

This course consists of a series of tests on various types of Diesel and other internal combustion engines, being more complete than those made in ME 61-C. Included in the equipment tested are 10 H.P. Fairbanks Morse stationary gasoline engine, 30 H.P. three-cylinder Fairbanks Diesel engine, Ford, Chevrolet, and Plymouth gasoline engines, and an automobile truck Diesel engine.

1½ semester hour credits

ME 63 *Mechanical Engineering Laboratory*

This is a continuation of course ME 62, to which it is generally similar. Some further experiments are made in the testing of materials, such as compressive, tensile, torsion impact, and bending tests. A boiler test of from ten to twenty-four hours' duration is made to determine the performance and efficiency of the boilers in the power plant; and oils and coals are tested in the laboratory to determine their characteristics and calorific values.

2½ semester hour credits

ME 63-B *Refrigeration Engineering Laboratory*

Experiments are made on various types of refrigeration and cooling apparatus. The refrigeration equipment consists of compression and absorption types and includes small commercial and domestic units using such refrigerants as ammonia and sulphur dioxide. A constant temperature room is used in testing the units. Insulation tests are also included in this course.

2½ semester hour credits

ME 63-C *Diesel Engine Laboratory*

This is a continuation of course ME 62-C to which it is generally similar. Some further experiments are made in testing materials of which Diesel engines are made such as tension, bending, compression, and shear tests, determination of calorific contents of Diesel fuels, and properties of lubricating oils.

2½ semester hour credits

ME 65 *Mechanical Engineering Laboratory*

This course is a condensation of courses in Engineering Laboratory ME 61 and ME 62, including some of the experiments mentioned in both courses. The work proceeds along the same general lines.

1½ semester hour credits

ME 66 *Mechanical Engineering Laboratory*

This is a continuation of course ME 65, with other tests on power plant equipment. The principles discussed in Heat Engineering ME 32 are here applied to actual conditions of operation.

1½ semester hour credits

ME 68 *Mechanical Engineering Laboratory*

This course is a condensation of courses in Engineering Laboratory ME 61 and ME 62, and is similar in method and content to course ME 65 and ME 66.

1 semester hour credit

ME 69 *Testing Materials Laboratory*

The work of this course is carried out by the students, under direction by faculty members. It includes tests to determine the elongation, reduction of areas, modulus of elasticity, yield point, and ultimate compressive strength of metals such as steel, cast iron, copper, and brass; compressive tests on timber and concrete; and tests to determine the deflection, modulus of elasticity, elastic limit, and ultimate transverse strength of steel and wooden beams subject to transverse load. Torsion and impact tests are carried out and their results correlated with those of the tensile tests.

The effect of various mixes and curing conditions on the tensile and transverse strength of cement and mortar are studied. Special problems are assigned in the failure of metals by fatigue.

1 semester hour credit

ME 70 *Testing Materials Laboratory*

A continuation of course ME 69.

1 semester hour credit

ME 73 *Aircraft Structures*

The fundamental analysis of the forces, reactions, shears, and moments as applied to aircraft structures is the object of this course.

4 semester hour credits

ME 74 *Aircraft Structures*

A continuation of course ME 73. Current methods employed in the analysis of airplane structures are used.

4 semester hour credits

ME 75 *Aircraft Design*

A layout problem with calculations for a simple airplane forms the subject matter of this course.

3½ semester hour credits

ME 76 *Aircraft Design*

A continuation of the problem in ME 75.

3½ semester hour credits

ME 77 *Aircraft Engine Design*

This course covers the design of an airplane engine involving the thermodynamic principles as well as the stresses in the crankshaft, connecting rods, cylinders, springs, and other parts of the engine.

4 semester hour credits

ME 78 *Aircraft Engine Design*

A design of an engine involving the same general analysis of stresses as listed under ME 77, but of a different type of engine is the work of this course.

4 semester hour credits

CURRICULUM III

Electrical Engineering

Probably none of the branches of scientific knowledge has been so markedly modified during the past decade as that relating to Electrical Engineering, nor has any other exerted such a profound influence upon the scientific thought of the period. "A science, like a plant, grows in the main by a process of infinitesimal accretion. Its theory is built like a cathedral through the addition by many builders of many different elements, and this is pre-eminently true of electrical theory." It is absolutely essential that the electrical engineer who hopes to make a success of his work should be able to grasp readily and absorb effectively the meaning and content of the many scientific memoirs recording the results of research bearing upon and directly influencing his chosen branch of engineering.

He must have a thorough appreciation of physical theory, a clear understanding of chemical principles, and a broad working knowledge of mathematics. It is essential that each student planning to take this curriculum should realize the fundamental necessity of obtaining a solid grounding in these three subjects upon which the success of his future work will definitely hinge.

The following table sets forth the pre-requisite courses of this department, together with the advanced courses for which they are pre-requisite. Pre-requisite courses must be completed before the advanced courses based upon them may be taken. Advanced courses are tabulated at the left, their pre-requisite to the right.

ADVANCED COURSES		PRE-REQUISITE COURSES	
Second Year			
M 5	Differential Calculus	M 1	Algebra, M 4 Analytic Geometry
ME 20	Applied Mechanics	P 3	Physics II
EL 1	Electrical Eng. I	P 2	Physics II
Third Year			
ME 22	Strength of Materials	ME 20	Applied Mechanics
EL 9	Electrical Engineering II	EL 2	Electrical Engineering I
M 7	Differential Equations	M 6	Integral Calculus
Fourth Year			
EL 17	Electrical Engineering III	M 6	Integral Calculus
ME 23	Strength of Materials	ME 22	Strength of Materials
EL 22	Electrophysics	M 7	Differential Calculus
Fifth Year			
EL 25	Electrical Engineering IV	EL 18	Electrical Engineering III
EL 29	Electrical Engineering V-A	EL 22	Electrophysics

III. Electrical Engineering

FIRST TERM		First Year		SECOND TERM	
Course Number	Course	Semester Hours	Course Number	Course	Semester Hours
E 1	English I	3	E 2	English I	3
M 1	Algebra	3	M 4	Analytical Geometry	5
M 3	Trigonometry	2	PE 2	Hygiene	1
D 1	Graphics I	3	D 2	Graphics II	3
P 1	Physics I	3	P 2	Physics I	3
CH 1	General Chemistry	4	CH 2	Inorganic Chemistry	3
PE 3-4	Physical Training	0	PE 3-4	Physical Training	0
PS 1-A	Orientation	0			
		18			18
Second Year					
M 5	Differential Calculus	3	M 6	Integral Calculus	3
P 3	Physics II	2	P 4	Physics II	2
P 5	Physics Laboratory	1	P 6	Physics Laboratory	1
D 3	Engineer. Drawing	2	ME 20	Applied Mechanics	3
IN 3	Prod. Processes I	2½	IN 4	Prod. Processes II	1½
EL 1	Electrical Eng. I	2	EL 2	Electrical Eng. I	2
		12½			12½
Third Year					
Ec 21	Economics	2	Ec 22	Economics	2
ME 21	Applied Mech.	3	ME 22	Str. of Materials	3
M 7	Differential Equa.	3	ME 30	Thermodynamics	2
EL 9	Electrical Eng. II	2	EL 10	Electrical Eng. II	2
EL 11	Electrical Eng. Lab.	1	EL 12	Electrical Eng. Lab.	1
EL 13	Precision of Measure	1½	EL 14	Electrical Measure.	2½
		12½			12½
Fourth Year					
E 3	Cont. Drama	2	E 4	Cont. Novel	2
ME 23	Str. of Materials	3	EL 22	Electrophysics	3
ME 31	Heat Engineering	2	ME 32	Heat Engineering	2
EL 17	Electrical Eng. III	2	EL 18	Electrical Eng. III	2
EL 19	Testing Laboratory	2	EL 20	Testing Laboratory	2
EL 23	Measure. Lab.	1½	EL 24	Adv. Measure. Lab.	1½
		12½			12½
Fifth Year					
C 7	Engineering Conf.	1	C 8	Engineering Conf.	1
ME 65	Mech. Eng. Lab.	1½	ME 66	Mech. Eng. Lab.	1½
EL 25	Electrical Eng. IV	3	EL 26	Electrical Eng. IV	3
EL 27	A.C. Mach. Lab.	2	EL 28	A.C. Mach. Lab.	2
EL 29	Electrical Eng. V-A	2½	EL 30	Electrical Eng. V-A	2½
EL 31	Electrical Eng. V-B	2½	EL 32	Electrical Eng. V-B	2½
		12½			12½

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of a liberal character, making a total of 145 semester hours required for the S.B. degree. This work may be taken in an extra 10-week period during the college year, or in two summer terms.

SYNOPSIS OF COURSES OFFERED
BY THE
DEPARTMENT OF ELECTRICAL ENGINEERING

Courses offered in the first term bear odd numbers; those offered in the second term bear even numbers.

EL 1 Electrical Engineering I

This course deals with the fundamental principles of D.C. machines, motional E.M.F. structural parts of machines, armature windings, armature reaction, commutation, subject matter which may be considered common to both generator and motor. In it also are considered the methods of field excitation and the characteristics of the shunt wound generator.

2 semester hour credits

EL 2 Electrical Engineering II

This course is a continuation of EL 1. It deals with the characteristics of the series and compound-wound generators, and the operating principles and characteristics of D.C. motors, shunt, series and compound both cumulative and differential together with the various methods of speed control.

2 semester hour credits

EL 3 Applied Electricity

This course gives to the non-electrical students those elements of modern electrical theory which seem most useful in view of the problems which these students are likely to meet in later professional practice. Lectures and problem work are given on direct current and on alternating current theory, on motors, and on some special applications of interest to civil engineers. Allowance is made for the fact that the non-electrical engineer rarely copes with electrical design, but frequently with application, and that his interest is in a broad understanding of this field.

2 semester hour credits

EL 5 Electrical Machinery

This course is concerned with the theory and application of the electrical equipment most often met by practising engineers. Descriptions of the parts of the machines, their operating characteristics and of their special fields of usefulness are extended chiefly over shunt, series and compound direct current motors and generators, alternators, transformers, synchronous and induction motors. Consideration is given to auxiliary apparatus insofar as necessary to a good understanding of the functioning of the machinery as a whole.

Tests are made on various direct and alternating current machines. The object is to give the students facility in connecting and operating the machines as well as to observe in actual practice the characteristics taken up in the lectures. Outside reports are required to be written up for each experiment.

4 semester hour credits

EL 6 Electrical Measurements

The course comprises a brief study of measurements in general, and precision measure as applied to electrical measurements in particular. Resistance devices, galvanometers, ammeters, and voltmeters are next discussed, the treatment of other instruments being taken up later in connection with their use. This is followed by a detailed discussion of the methods of measuring various electrical quantities (which involves the use of visual indicating devices) resistance, resistivity, conductance; D.C. electromotive force, current, power, and energy. Some consideration is given to the principles and operation of vacuum tubes. Appropriate laboratory experiments are included.

2½ semester hour credits

EL 9 Electrical Engineering II

A study of electrostatic fields, force, and potential; magnetic fields; and the energy content of each. The elementary differential equations of circuits containing resistance, inductance, and capacity combinations are solved. Complex algebra as applied to the study of sinusoidal waves concludes the course.

2 semester hour credits

EL 10 Electrical Engineering II

A study of single phase alternating currents and circuits, including series, parallel, and series-parallel combinations; Kirchhoff's laws; non-sinusoidal waves; power; and filters.

2 semester hour credits

EL 11 Electrical Engineering Laboratory

This is a laboratory course intended to develop a thorough understanding of the operating characteristics of the individual machines studied in course EL 1 and EL 2, including work and experiments on armature and field resistance measurement, heat runs, connection of D.C. generators, and speed variations in a shunt motor. As it is also the purpose of this course to inculcate correct methods of work and preparation of preliminary and final reports, no definite number of experiments is required, but the utmost emphasis is placed upon the quality of the data and style and content of the completed reports.

1 semester hour credit

EL 12 *Electrical Engineering Laboratory*

This course continues the approach outlined in EL 11 and consists of experiments on series and compound motors, stray power testing and compound generator characteristics.

1 semester hour credit

EL 13 *Precision of Measurements*

This course is designed to acquaint the student with the theory of precision measure as applied to electrical measurement in particular. Some of the subjects covered are theory of measurements, directly and indirectly measured quantities, recording of observations, rules of significant figures, classification of error, law of error, characteristics of error, and laws of average deviation.

Most of the problems studied fall in the following two general classifications: (1) Given the precision measures of the directly measured quantities, to determine the precision measure of the indirectly measured quantity as calculated by the use of engineering equations which apply to measurements work. (2) Given the prescribed precision to be obtained in the indirectly measured quantity, to determine the precision measure of the directly measured components which enter into its calculation.

The principles taught in this course are immediately applied in all experiments run in the measurements laboratory and so far as necessary in the machine testing laboratory.

1½ semester hour credits

EL 14 *Electrical Measurements*

In this course parts and theory of operation of resistance devices, galvanometers, ammeters, and voltmeters are discussed, the treatment of other instruments being taken up later in connection with their use. This is followed by a detailed discussion of the methods of measuring various electrical quantities (which involves the use of visual, indicating devices) resistance, resistivity, conductance; D.C. electromotive force, current, power, and energy.

The following electrical quantities are taken up, with a detailed discussion of the methods of measuring them, which involves the use of both visual and sound indicating devices; resistance, capacitance, inductance, magnetic induction, A.C. power and energy. This also includes some work on the uses of circuits and bridges designed for high frequency measurements and tube constant determination. The student is given a thorough discussion of the construction, theory of operation, method of use, sources of error, etc., of the types of measuring instruments used in commercial work and in the standardizing laboratory.

2½ semester hour credits

EL 17 Electrical Engineering III

This course is a continuation of Electrical Engineering II. It deals principally with polyphase circuits. Both balanced and unbalanced circuits are considered. The unbalanced condition is studied both by use of Kirschhoff's Laws and by the method of symmetrical phase components.

2 semester hour credits

EL 18 Electrical Engineering III

A careful, thorough, and detailed study of the construction, theory, operating characteristics, and testing of transformers is the aim of this course. Particular attention is given to single phase and polyphase transformers used for power purposes. Special types of transformers studied include the constant current transformer, the auto-transformer, and instrument transformers.

2 semester hour credits

EL 19 Electrical Testing Laboratory

This course consists of a series of experiments involving the testing of machines. Preliminary reports are written by all students before the tests are performed in the laboratory. Experiments of the following type are used: measurement of stray load loss of D.C. motor, efficiency of machine by method of electrical supply of losses, electrical separation of losses, measurement of losses by retardation method, speed control of direct current motors by thyratrons.

2 semester hour credits

EL 20 Electrical Testing Laboratory

This is a continuation of EL 19 but the experiments are mostly on alternating current circuits and transformers. Typical experiments are studies of alternating current series and parallel circuits, ratio of transformation and core loss measurements for transformers, determination of the efficiency and voltage regulation of a transformer, transformer heat test, tests on a constant current transformer.

2 semester hour credits

EL 22 Electrophysics

This course begins with the development and interpretation of Maxwell's field equations and wave equations, and continues with the study of the electron, modern electrical theory, photo-electricity, x-ray, radio activity, and the quantum theory.

3 semester hour credits

EL 23 Electrical Measurements Laboratory

This course consists of a series of experiments emphasizing the principles developed in courses EL 13 and EL 14. The student becomes familiar with the use of the standard apparatus in use in testing laboratories. Particular stress is laid on the correct use of the apparatus, and precision discussions are required throughout.

The experiments cover such matters as the measurement of resistance by various methods, resistivity, conductivity, electromotive force, current, inductance, mutual inductance, capacitance, hysteresis loss, etc., in cable testing, magnetic testing, wave form determination, and the use of special apparatus.

Thorough training in the principles of precision of measurements is also given, and applied to each experiment performed.

1½ semester hour credits

EL 24 Advanced Measurements Laboratory

This course is given over to the use of laboratory and secondary standards and precision methods as applied to checking resistances, calibration of indicating and integrating instruments of various types.

It involves the use of the potentiometer, Weston laboratory standard instruments; precision model Kelvin Low Resistance and Carey-Foster Bridges; Westinghouse portable oscillograph, cathode ray oscillograph; ordinary, reflex, and logarithmic vacuum tube voltmeter, Anderson Bridge, Edgerton Stroboscope; low, medium, and high frequency oscillator; vacuum tube bridge; potential phase shifters and rotating standard; testing for characteristics and investigation of the action of multi-electrode tubes, thyatron tungar rectifier, artificial telephone line, and Piezo oscillating crystals.

Precision work is insisted on throughout, and while the student is trained to develop speed and quickness of manipulation, this is never at the expense of quality and accuracy of the work.

1½ semester hour credits

EL 25 Electrical Engineering IV

In this course a detailed study is made of alternating current synchronous machines. In addition to the study of the synchronous generator and the synchronous motor, considerable time is spent in discussing the problems involved in operating synchronous generators in parallel.

3 semester hour credits

EL 26 Electrical Engineering IV

This course is a continuation of EL 25. It deals with other types of alternating current machines. The machines studied in detail include the synchronous converter, the mercury arc rectifier, single phase and polyphase induction motors, induction generators, series and repulsion motors. The method of symmetrical phase components is used in the study of unbalanced conditions in certain types of motors.

3 semester hour credits

EL 27 A.C. Machinery Laboratory

This is a laboratory course to accompany EL 25 in alternating current machinery. The work includes tests on the heating, efficiency, and determination of the characteristics of various types of alternating current machinery, such as transformers, generators, and motors. A detailed preliminary study is made of each assigned experiment, involving the method to be used in obtaining the necessary data, and the manner of obtaining the required results from this data. This is embodied in a preliminary report. The student then does the necessary laboratory work to obtain the required data, and finally works up the whole into a detailed final report. A minimum of assistance is given by the instructor in the actual laboratory work, the initiative and resourcefulness of the student being depended on to the greatest extent.

2 semester hour credits

EL 28 A.C. Machinery Laboratory

This is a continuation of EL 27 and accompanies EL 26. Preliminary and final reports similar to those of EL 27 are required in this course but the experiments deal more largely with the various types of alternating current motors. Provision is also made, toward the latter part of this course, for some choice by the student as to the type of investigation or experiment he wishes to carry on.

2 semester hour credits

EL 29 Electrical Engineering V-A

This course is designed to give the student a thorough grounding in the theory and application of the various types of electron tubes. It is not a course in radio communication although, of course, the tubes used for this purpose are considered. The material covered deals with fundamental constants of the vacuum tube, equivalent and alternative plate and grid circuit theorems, paths of operation, maximum, and maximum undistorted power output, inter-electrode capacity and low power amplifiers.

2½ semester hour credits

EL 30 Electrical Engineering V-A

This course is based on material covered in EL 29 and takes up the discussion of the uses of thermionic tubes in measuring instruments, oscillographs, rectifying and amplifying circuits, oscillators, and modulators, and so on.

2½ semester hour credits

EL 31 Electrical Engineering V-B

This course given during the first semester of the senior year deals with the fundamentals of electrical transmission circuits. Hyperbolic functions and their application, the general differential equations of the transmission line, fundamental line constants, position angles, Pi and T structures, all developed for the D.C. circuits.

2½ semester hour credits

EL 32 Electrical Engineering V-B

This course is a continuation of EL 31. It begins with the consideration of complex hyperbolic functions and then deals with the alternating current transmission circuit, the initial transient state, quarter and half wave lines, and the fundamental properties of artificial lines and filter circuits.

2½ semester hour credits

CURRICULUM IV

Chemical Engineering

The chemical engineer has been well defined as a "professional man experienced in the design, construction, and operation of plants in which materials undergo chemical and physical change." It is the duty of the chemical engineer to cut the costs, increase production, and improve the quality of the products in the industry.

The chemical engineer must possess a working knowledge of the fundamental sciences, he must understand and know how to work with men, and he must recognize in his work the "correct appraisal of values and costs." In addition, he must possess the ability to apply his knowledge to the development and operation of chemical processes and plants.

The curriculum furnishes instruction in the fundamental sciences of chemistry, physics, and mathematics; the elements of electrical and mechanical engineering; and in the basic unit chemical engineering operations, such as heating, evaporating, filtering, distilling, crushing, extracting, drying, and so forth. Courses of a more liberal nature are also available as electives in order that the student may become acquainted with fields of knowledge other than chemical engineering and thus broaden his educational background.

The following table sets forth the pre-requisite courses of this department, together with the advanced courses for which they are pre-requisite. Pre-requisite courses must be completed before the advanced courses based upon them may be taken. Advanced courses are tabulated at the left, their pre-requisite to the right.

ADVANCED COURSES	PRE-REQUISITE COURSES
<i>Second Year</i>	
M 5 Differential Calculus	M 1 Algebra, M 4 Analytic Geometry
ME 20 Applied Mechanics	P 3 Physics II
CH 11 Qual. Anal. Lab.	CH 2 Inorganic Chemistry
CH 9 Qualitative Analysis	CH 2 Inorganic Chemistry
<i>Third Year</i>	
ME 22 Strength of Materials	ME 20 Applied Mechanics
CH 15 Quantitative Analysis	CH 10 Qualitative Analysis
<i>Fourth Year</i>	
CH 23 Chem. Eng. III	CH 21 Chemical Eng. I
<i>Fifth Year</i>	
CH 25 Industrial Chemistry	CH 10 Qualitative Analysis
CH 35 Ind. Org. Chemistry	CH 32 Org. Chemistry II
CH 45 Physical Chem. III	CH 44 Physical Chem. II

IV Chemical Engineering

FIRST TERM			First Year		SECOND TERM		
Course No.	Course	Semester Hours	Course No.	Course	Semester Hours	Course No.	Semester Hours
E 1	English I	3	E 2	English I	3		
M 1	Algebra	3	M 4	Anal. Geometry	5		
M 3	Trigonometry	2	PE 2	Hygiene	1		
D 1	Graphics I	3	D 2	Graphics II	3		
P 1	Physics I	3	P 2	Physics I	3		
CH 1	Gen. Chemistry	4	CH 2	Inorg. Chemistry	3		
PE 3-4	Physical Train.	0	PE 3-4	Physical Train.	0		
Ps 1-A	Orientation	0					
		18			18		
Second Year							
M 5	Diff. Calculus	3	M 6	Integral Calculus	3		
P 3	Physics II	2	P 4	Physics II	2		
P 5	Physics Lab.	1	P 6	Physics Lab.	1		
EL 5	Electrical Mach.	4	ME 20	App. Mechanics	3		
CH 9	Qual. Analysis	2	CH 10	Qual. Analysis	2		
CH 11	Qual. Anal. Lab.	1	CH 12	Qual. Anal. Lab.	1		
		13			12		
Third Year							
Ec 21	Economics	2	Ec 22	Economics	2		
ME 21	App. Mechanics	3	ME 22	Str. of Mater.	3		
ME 27	Metallography	2½	ME 30	Thermodynamics	2		
CH 15	Quant. Analysis	1	CH 16	Quant. Analysis	2		
CH 17	Quant. Anal. Lab.	2	CH 18	Quant. Anal. Lab.	2		
CH 21	Chem. Eng. I	2	CH 22	Chem. Eng. II	1½		
		12½			12½		
Fourth Year							
E 3	Cont. Drama	2	E 4	Cont. Novel	2		
CH 41	Lib. Res. Prbs.	1	ME 40	Power Plt. Equip.	1		
CH 23	Chemical Eng. III	3	CH 24	Chemical Eng. IV	3		
CH 29	Chem. Eng. Lab.	1½	CH 30	Chem. Eng. Lab.	1½		
CH 31	Organic Chem. I	2	CH 32	Organic Chem. II	2		
CH 33	Org. Chem. Lab. I	1	CH 34	Org. Chem. Lab. II	1		
CH 43	Phys. Chem. I	2	CH 44	Phys. Chem. II	2		
		12½			12½		
Fifth Year							
C 7	Eng. Conf.	1	C 8	Eng. Conf.	1		
IN 5	Industrial Mgt. I	2	IN 6	Industrial Mgt. II	2		
CH 25	Industrial Chem.	1	CH 26	Industrial Chem.	1		
CH 27	Chem. Plant Des.	3	CH 28	Chem. Plant Des.	3		
CH 35	Ind. Org. Chem.	2	CH 36	Ind. Org. Chem.	2		
CH 37	Org. Chem. Lab. III	1½	CH 38	Org. Chem. Lab. IV	1½		
CH 45	Physical Chem. III	2	CH 46	Physical Chem. IV	2		
		12½			12½		

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of a liberal character, making a total of 145 semester hours required for the S.B. degree. This work may be taken in an extra 10-week period during the college year, or in two summer terms.

SYNOPSIS OF COURSES OFFERED
BY THE
DEPARTMENT OF CHEMICAL ENGINEERING

Courses offered in the first term bear odd numbers; those offered in the second term bear even numbers.

CH 1 General Chemistry

An introductory course not requiring previous knowledge of the subject, and giving a survey of the entire chemical field with some consideration of its background. The fundamental principles of the science are adequately taught through the use of the problem technique, all problems being based on practical applications. Visual aids such as lecture demonstrations, lantern slides, and moving-pictures contribute to a better understanding of the subject matter and its applications to industrial problems.

Two lectures, a recitation, and a laboratory period constitute the weekly plan of instruction.

4 semester hour credits

CH 2 Inorganic Chemistry

This course undertakes a more thorough treatment of the modern developments of inorganic chemistry. Such topics as concentration, mass-action law, dissociation, chemical and ionic equilibria, common ion effect, Ph value and hydrogen ion concentration are studied in considerable detail. Attention is also given to the recent ideas of the atomic structure.

It is essential that the student realize the necessity of obtaining a thorough grounding in these subjects, upon which the success of his future work depends.

The course is profusely illustrated by chemical calculations based on practical applications.

3 semester hour credits

CH 9 Qualitative Analysis

The object of this course is to give the student knowledge of the various fundamental qualitative laws and principles. A portion of the time is devoted to the formulation of numerical terms which are essential to understanding mass law action, chemical equilibrium, ionic equilibria, solubility product, hydrolysis, and oxidation and reduction constants.

It not only furnishes a definite and exact working basis but leads, ultimately, to independent and original thinking, thus preparing the way to more difficult problems in chemical engineering. Little real intelligent progress can be made unless these theories are understood, properly appreciated, and correctly applied.

The lectures are supplemented by recitations and quizzes and outside assignments devoted to the solution of problems.

2 semester hour credits

CH 10 *Qualitative Analysis*

The essential features of the course are a system of lectures, recitations, and quizzes carefully co-ordinated with laboratory work. The object is to train the student in exact methods, with an attempt to make clear the reason for each operation and the ability to apply them to the laws of chemical equilibrium, especially the principles relating to solubility, ionization, complex ion formation, and oxidation and reduction of substances in solution.

Special attention is given to methods that will provide for a reliable detection of a small quantity of any constituent in the presence of a large quantity of any other constituent.

A part of the course is a method of systematic analysis of getting substances into solution by solvent and fusion treatments.

The importance of exact method of qualitative detection can not be overestimated. It supplies the fundamental data upon which industrial operations may be successfully carried out.

2 semester hour credits

CH 11 *Qualitative Analysis Laboratory*

The object of the laboratory exercises is to cultivate scientific attitude and habit of thought, and to increase power of acquiring knowledge. The work permits the student to accurately observe and study the phenomena concerned with certain chemical changes of fundamental importance and to connect these observations with the theoretical discussions held in the lecture and recitation classes in inorganic chemistry.

Careful manipulations, thoroughness in observation, and accuracy in arriving at conclusions are required of each student. Neat and satisfactory notes will be considered an essential part of the work.

1 semester hour credit

CH 12 *Qualitative Analysis Laboratory*

The experiments in this course, illustrating the solubilities of various compounds, are so selected and logically arranged that they may later be combined to form a complete system of analysis.

In connection with each experiment, care is taken that the student understands the reactions and theory involved. The latest developments in qualitative tests are used frequently. From time to time unknown solutions and substances are given to the student for analysis to emphasize the practical aspects of the work.

This course also includes the reactions and separations of the anions, methods of solution, and actual qualitative analyses of various industrial products and naturally occurring materials.

1 semester hour credit

CH 15 *Quantitative Analysis*

It is the purpose of this course to give to the student a realization of the scientific development of quantitative methods. Each of the major operations such as weighing, measurement of volumes, titration, filtration, ignition, and combustion, is considered from the standpoint of the theoretical principles involved, and with due consideration of the manipulative technique necessary.

This is followed by the combination of these operations and their application to actual analysis including a comprehensive study of volumetric methods and of the more elementary parts of gravimetric analysis.

As the correct calculation of analytical results is of no less importance than the actual procedures of analysis, a number of problems forms a very important part of the course.

1 semester hour credit

CH 16 *Quantitative Analysis*

This course, a continuation of CH 15, is similarly conducted. After consideration of the more advanced parts of gravimetric analysis and of systematic mineral procedures, the remainder of the course consists of a critical discussion of common technical methods, including the standard ones for the analysis of steel, non-ferrous alloys, fuels, oils, gas, water, fertilizers, foods, etc.

2 semester hour credits

CH 17 *Quantitative Analysis Laboratory*

This is a laboratory course intended to illustrate by actual use the various analytical methods considered in CH 15. After certain preliminary experiments designed to acquaint the student with the apparatus used; volumetric analysis, including acidimetry and alkalimetry, oxidation, reduction, and precipitation methods are taken up. This is followed by simple gravimetric analysis.

2 semester hour credits

CH 18 *Quantitative Analysis Laboratory*

This course includes not only the usual illustrative gravimetric determinations, but also electrolytic, electrometric, combustion, and optical methods.

In the latter half of the course actual industrial methods are used so that at its completion the students should be able to perform satisfactorily any ordinary analysis.

2 semester hour credits

CH 21 Chemical Engineering I

This course includes methods of determining rates of flow and power consumption of fluids flowing through pipe lines. The course differs from the usual course in hydraulics chiefly in the amount of emphasis placed on the flow of gases and oils. Special attention is given to Bernoulli's theorem, the orifice, the venturi meter, the Thomas flow meter, critical velocity, viscosities, friction losses.

2 semester hour credits

CH 22 Chemical Engineering II

This course is concerned principally with the study of combustion and equipment in which combustion processes are carried on. Many problems pertaining to combustion efficiency, flue gas, maximum temperature obtainable, and combustion equipment are solved during the course.

1½ semester hour credits

CH 23 Chemical Engineering III

This course consists of a study of the principles underlying the mechanical operations peculiar to the chemical industry. Such unit operations as flow of heat, evaporation, humidity control, and air conditioning are considered. Many problems of a practical nature are solved during the course.

3 semester hour credits

CH 24 Chemical Engineering IV

This course is a continuation of CH 23. The unit operations studied are drying, crushing, separation, filtration, distillation, and gas absorption.

3 semester hour credits

CH 25 Industrial Chemistry

The more important industrial processes are studied with a view to the general chemistry involved and to the various types of apparatus necessary to carry out the chemical reactions. The student is given a broad survey of the field of chemical industry and a knowledge of the relationships of the different industries to one another. The salt and heavy acid industries are studied intensively and the uses of their products in other industries are carefully considered. Special attention is given to the economics of the chemical industry. Lectures, assigned readings, and reports presented by individual students upon assigned topics are included in the course.

1 semester hour credit

CH 26 *Industrial Chemistry*

This course is a continuation of CH 25 and covers the alkali and miscellaneous inorganic industries.

1 semester hour credit

CH 27 *Chemical Plant Design*

This course includes a consideration of the various problems which arise during the evolution of a chemical plant. The study of the development of a chemical plant is begun with a survey of the literature, continued in the laboratory on experimental and semi-plant scales.

3 semester hour credits

CH 28 *Chemical Plant Design*

The experimental work of CH 27 is continued and the data obtained is calculated to a large scale basis. A report is then prepared on the advisability of constructing the chemical plant. Such factors as capital ratio, plant layout, selection and cost of equipment, labor, interest, depreciation, taxes, insurance, and expected financial return, are considered and included in the report as far as possible.

3 semester hour credits

CH 29 *Chemical Engineering Laboratory*

A laboratory course based on the unit operations studied in Chemical Engineering III. The squad system is used. Experiments are performed on small-scale plant equipment that has been specially designed or selected for the purpose. Detailed reports are required.

1½ semester hour credits

CH 30 *Chemical Engineering Laboratory*

A continuation of CH 29. Experiments are performed in the unit operations which are being studied simultaneously in CH 24.

1½ semester hour credits

CH 31 *Organic Chemistry I*

This course includes a study of the recognized basic principles of the aliphatic organic compounds. An attempt is made to present the material from a connected and understandable viewpoint by a study of the close relationship which exists between the various classes of compounds. Considerable emphasis is placed on genetic charts and synthesis of typical classes of compounds, by which the class being studied is related to classes studied previously.

Some of the more important compounds are studied in detail. The industrial applications of many of the theoretical principles of the subject are considered in order to acquaint the student with the practical nature of organic chemistry.

2 semester hour credits

CH 32 Organic Chemistry II

This course is a continuation of CH 31, but deals with the preparation and characteristic reactions of the aromatic organic compounds. Special attention is given to polymerization, diazotization, dyes, and the use of catalyst, nitration, and sulfonation.

A few of the more important hetrocyclic compounds are studied.

2 semester hour credits

CH 33 Organic Chemistry Laboratory I

This course consists of a selected number of preparations and includes the more important manipulations designed to teach the student the laboratory technique involved in organic chemical work such as fractional distillation, steam distillation, extraction, etc.

These preparations familiarize the student with the general types of chemical changes such as esterification, halogenation, nitration, reduction, diazotization, and saponification.

One of the important features of the course is to teach the student a definite method of keeping notes of his laboratory work, all detailed reactions, calculations, and also the answers to a set of questions on each experiment performed.

1 semester hour credit

CH 34 Organic Chemistry Laboratory II

This course is a continuation of CH 33. The preparations in this course serve to acquaint the student with such types of chemical reactions as sulfonation, the Grignard reaction, the Perkins reaction, Skraup's synthesis, the Friedel-Crafts' reaction, and the preparation of dyes.

In addition to the manipulative techniques taught in CH 33, this course introduces the use of vacuum distillations, fractional crystallization, and separations by physical and chemical means.

Laboratory notes and answers to questions are recorded as in CH 33.

1 semester hour credit

CH 35 *Industrial Organic Chemistry*

An attempt is made to present in a systematic manner the principles and practice of the more important and well defined reactions in organic synthesis.

Attention is directed not only to the chemistry and products of reaction but equally to the contributing factors which lead to efficient operations. The course includes an examination of the reactants, an inquiry into the mechanism of the reaction, a knowledge of the chemical and physical factors involved, observations regarding the design and construction of equipment, and, finally, a study of typical technical applications.

2 semester hour credits

CH 36 *Industrial Organic Chemistry*

This course is a continuation of CH 35. An attempt is made to co-ordinate the study of fundamental principles of organic synthesis with the requirements of industrial plants.

The latter part of the course is devoted to a study of the synthesis of the terpenes and their genetic relationships.

2 semester hour credits

CH 37 *Organic Chemistry Laboratory III*

The purpose of this course is to familiarize the student with the chemical and physical tests used in qualitative organic analysis. A series of experiments, based on the classification or reactions of organic compounds, serves as a basis for the examination of simple liquid and simple solid compounds and the preparation of suitable derivatives of them.

This system makes possible the collection of sufficient data on each problem for a comprehensive written report. The student is placed on his own responsibility and is requested to use and acquaint himself with the chemical literature and standard reference books available on this subject in libraries.

1½ semester hour credits

CH 38 *Organic Chemistry Laboratory IV*

This course is a continuation of CH 37 but is much broader in scope. It includes the examination of liquid and solid mixtures of two and three components each. This is followed by the analysis of one or more industrial organic compounds, depending on the time available.

A systematic procedure is employed in the separation, identification, and preparation of the derivatives of the mixtures. Library work and written reports are an essential part of this course.

1½ semester hour credits

CH 41 *Library Research Problems*

This course is intended to acquaint the chemical student with the constantly increasing volume of scientific literature pertaining to the engineering field. While intended primarily as preparatory to thesis work which follows, it furnishes also a very valuable tool for use in later industrial and scientific work.

After a brief outline of the entire field of scientific literature and a description of various methods of library procedure, the various available sources of scientific information are investigated. Original sources such as scientific journals, government publications, patents and manufacturers' catalogs are first considered. A survey of secondary sources follows, including a study of abstracting journals, reviews, bibliographies, handbooks, standard reference books, encyclopedias, etc. A series of individual library problems, in which the student is required to apply the information obtained in the classroom, forms a very important part of the course.

1 semester hour credit

CH 43 *Physical Chemistry I*

This course begins with a short resume of the field of physical chemistry, and its relationship to the other courses in chemistry and chemical engineering. Following this, atomic and molecular weights, and the properties of gases, liquids, solids, and non-ionized, ionized, and colloidal solutions are taken up. Throughout this course, as well as in Physical Chemistry CH 44, quantitative methods are emphasized and the solving of a number of illustrative problems is required.

2 semester hour credits

CH 44 *Physical Chemistry II*

This course, which is similar in character to Physical Chemistry CH 43, includes a consideration of the following topics: rates of reaction, homogeneous and heterogeneous equilibrium, and thermo-chemistry. From time to time industrial and technical applications are considered from the standpoint of physical chemistry, but in such a way as not to lose sight of the broad field of the subject.

2 semester hour credits

CH 45 *Physical Chemistry III*

This course, which is similar in character to the preceding ones, considers such portions of the fields of electrochemistry and thermodynamics as are of value to chemical engineers. The laboratory work which accompanies this and the succeeding course is designed not only to illustrate the work of the classroom but also to review that of the previous courses.

2 semester hour credits

CH 46 *Physical Chemistry IV*

In this course which is of a different nature from those which precede it, the subjects of photochemistry, radioactivity, periodic classification and electrical theory of matter are taken up and as much of the elements of the quantum theory as the time available will allow.

2 semester hour credits

CURRICULUM V

Industrial Engineering

Industrial engineering is a program of study in which the student is given a foundation in the elementary and tool subjects of mechanical engineering combined with an intensive program of study in business management and selected engineering courses which are specially designed for men who seek positions in the administration and management of industrial enterprises.

Since the fundamental training for a prospective mechanical or industrial engineer is essentially the same, the two groups are combined for instructional purposes during the freshman, sophomore, and middler years. The attention of industrial engineering students is called to the following courses offered in these years which constitute a part of the strictly professional training for becoming an industrial engineer:

IN 3 Production Processes CI 13 Materials
 IN 4 Production Processes (Tool Eng.) ME 27 Metallography
 ME 40 Power Plant Equipment

The following table sets forth the pre-requisite courses of this department, together with the advanced courses for which they are pre-requisite. Pre-requisite courses must be completed before the advanced courses based upon them may be taken. Advanced courses are tabulated at the left, their pre-requisite to the right.

ADVANCED COURSES	PRE-REQUISITE COURSES
	<i>Second Year</i>
M 5 Differential Calculus	M 1 Algebra, M 4 Analytic Geometry
ME 20 Applied Mechanics	P 3 Physics II
	<i>Third Year</i>
ME 22 Strength of Materials	ME 20 Applied Mechanics
	<i>Fourth Year</i>
ME 23 Strength of Materials	ME 22 Strength of Materials
IN 24 Statistics	IN 23 Statistics
	<i>Fifth Year</i>
IN 9 Cost Accounting	IN 8 Industrial Accounting
IN 25 Industrial Plants	ME 23 Strength of Materials
	IN 3, 4 Production Processes
IN 26 Industrial Plants	IN 6 Industrial Management
	ME 40 Power Plant Equipment

V Industrial Engineering

FIRST TERM			SECOND TERM		
Course Number	Course	Semester Hours	Course Number	Course	Semester Hours
E 1	English I	3	E 2	English I	3
M 1	Algebra	3	M 4	Analytic Geometry	5
M 3	Trigonometry	2	PE 2	Hygiene	1
D 1	Graphics I	3	D 2	Graphics II	3
P 1	Physics I	3	P 2	Physics I	3
CH 1	General Chemistry	4	CH 2	Inorganic Chemistry	3
PE 3-4	Physical Training	0	PE 3-4	Physical Training	0
PS 1-A	Orientation	0			
		18			18
Second Year					
M 5	Differential Calculus	3	M 6	Integral Calculus	3
P 3	Physics II	2	P 4	Physics II	2
P 5	Physics Laboratory	1	P 6	Physics Laboratory	1
EL 5	Electrical Mach.	4	ME 20	Applied Mechanics	3
IN 3	Prod. Processes I	2½	IN 4	Prod. Processes II	1½
			D 4	Machine Drawing	2
		12½			12½
Third Year					
Ec 21	Economics	2	Ec 22	Economics	2
CI 13	Materials	1	CI 12	Hydraulics	2
ME 1	Mechanism	3	EL 6	Electrical Measure.	2½
ME 21	Applied Mechanics	3	ME 22	Str. of Mat.	3
ME 27	Metallography	2½	ME 30	Thermodynamics	2
ME 13	Internal Comb. Eng.	1	ME 40	Power Plant Equip.	1
		12½			12½
Fourth Year					
E 3	Cont. Drama	2	E 4	Cont. Novel	2
IN 5	Industrial Mgt.	2	IN 6	Industrial Mgt.	2
IN 7	Industrial Acct.	3	IN 8	Industrial Acct.	3
IN 23	Statistics	2½	IN 24	Statistics	2½
ME 23	Str. of Mat.	3	ME 42	Heat. and Air Cond.	2
			ME 68	Mech. Eng. Lab.	1
		12½			12½
Fifth Year					
C 7	Engineer. Conf.	1	C 8	Engineer. Conf.	1
IN 9	Cost Accounting	2	IN 10	Cost Accounting	2
IN 11	Methods Engineering	2	IN 16	Personnel Adm.	2
IN 15	Sales Engineering	1½	IN 18	Sales Engin. Probs.	2
IN 25	Industrial Plants	4	IN 26	Industrial Plants	4
IN 21	Contracts	2	IN 14	Industrial Finance	1½
		12½			12½

NOTE: In addition to the prescribed program shown above, each student must complete at least ten semester hours of credit in electives of a liberal character, making a total of 145 semester hours required for the S.B. degree. This work may be taken in an extra 10-week period during the college year, or in two summer terms.

SYNOPSIS OF COURSES OFFERED
BY THE
DEPARTMENT OF INDUSTRIAL ENGINEERING

Courses offered in the first term bear odd numbers; those offered in the second term bear even numbers.

IN 3 Production Processes I

This is a descriptive course in which are studied the methods employed in foundry work and shop practice, including the wood working and machine shop.

The work is composed largely of demonstrations by the instructor, covering the principles of molding for the purpose of showing the reasons for draft and the special features of pattern construction. The names and characteristics of materials, equipment, and machines used in the foundry are taken up in detail, and the methods of tempering sand and making simple green sand molds explained.

The construction, operation, and uses of the various machine tools, such as the lathe, boring mill, milling machine, drill press, grinder, planer, gear cutter, and shaper are explained by lectures and demonstrations.

2½ semester hour credits

IN 4 Production Processes II

This course is designed to acquaint the student with the fundamental principles of tool engineering as applied in the modern manufacturing plant.

The tools used in production are discussed and their care and maintenance illustrated.

Considerable time is devoted to jig and fixture design. Calculations are developed which may be used to determine relative costs and advantages in using various types of shop equipment.

1½ semester hour credits

IN 5 Industrial Management

The course in Industrial Management places emphasis on the administrative phases of factory and plant operation. It deals with the location of the plant; plant design, structure, and plant services; plant layout; standardization, simplification, and specialization; and the public relations of industry.

2 semester hour credits

IN 6 Industrial Management

This course is a continuation of Industrial Management IN 5. It deals with the control of plant operations. Each department of a modern industrial concern is considered, emphasis being placed on the organization and management problems confronted and how they may be handled, with the intention that the student shall become familiar with the activities and general working of each department and the relationship which the departments hold to one another and to the business as a whole. In detail are considered: budgeting, standards of performance, wage systems, organization, routing, scheduling, dispatching, inventory control, quality control, and visual controls such as the organization chart, planning board, and departmental report. Considerable attention is given to the distribution of overhead expenses and standard costs.

2 semester hour credits

IN 7 Industrial Accounting

A course designed for the engineer studying accounting for the first time, including the elements of books of original and final entry, the construction and analysis of income statements, balance sheets, work sheets, and the transactions involving interest, discounts, notes, and drafts.

3 semester hour credits

IN 8 Industrial Accounting

A continuation of course IN 7 presenting the accounting problems of partnerships, corporations, manufacturing businesses, as well as miscellaneous problems on accounting.

3 semester hour credits

IN 9 Cost Accounting

A thorough study of the principles of costing process, job order and special order manufacturing, through the presentation and solution of actual cost problems.

2 semester hour credits

IN 10 Cost Accounting

A continuation of course IN 9, presenting cost systems, standard costs and the relationships of cost, price, and profits.

2 semester hour credits

IN 11 Methods Engineering

This course comprises (1) a detailed study of time and motion study work; (2) a complete study and actual practice in micro-motion which is the use of motion pictures in the motion study

work; (3) a preparation of simo-charts (the use of colored charts and symbols called Therbligs which show all the elements in an operation cycle); (4) the making of process charts which is the use of specifically designed symbols, or industrial shorthand, to record motion analysis.

2 semester hour credits

IN 14 Industrial Finance

The course in Industrial Finance is divided into two parts: The first half of the course presents the differences in the organization of partnerships, corporations, individual proprietorships, joint-stock companies, and holding companies.

The second half of the course deals with problems of financial analysis. Industries are examined to determine their financial condition; their position in relation to similar concerns; the proportion of their fixed and variable expenditures; and the effect of price cutting and price changes on their sales volume, costs, and capital structure. Care is taken to give the student a basis for determining what constitutes sound financial policy for any industrial enterprise.

1½ semester hour credits

IN 15 Sales Engineering

This course in the principles of marketing is designed to acquaint the engineering student with the field of distribution. It includes a complete study of the functions of marketing, the institutions and middle-men of the market, a study of the trade channels used to market specific commodities, placing particular emphasis on industrial goods.

1½ semester hour credits

IN 16 Personnel Administration

A consideration of what modern industry is doing in making an application of science to the obtaining and retaining of an effective and co-operative working force. The student studies thoroughly personnel administration systems now in use including the preparation and use of many forms among which are the occupational description, application, and interview blanks, promotion charts, wage scales, personnel control charts, etc. In addition, such subjects as wage payment plans, profit sharing, the training of workmen, workers' security plans and labor union, and management relationships are given attention.

2 semester hour credits

IN 18 Sales-Engineering Problems

This course is a continuation of IN 15. It presents problems and case material for use in making application of the principles of marketing industrial goods. Considerable time is devoted to the study of the regulation and control of marketing processes and institutions by governmental agencies and legislation.

2 semester hour credits

IN 21 Contracts

Preparation for a career as an industrial engineer demands an understanding of the fundamental legal principles upon which modern business transactions are based. The course in Contracts treats of the common law rules which underlie all branches of business law. The study of cases and decisions is supplemented by lectures and assigned readings in textbooks in order to develop a thorough understanding of the essentials of a valid contract such as offer and acceptance, consideration and form. The interpretation, operation and discharge of contracts are also considered. Such topics as agreement, competent parties, reality of consent, legality of object, sealed instruments and the Statute of Frauds are treated in detail.

2 semester hour credits

IN 23 Industrial Statistics

The increasing use of statistics in business and in the field of industrial engineering makes essential an understanding of the fundamental methods and applications of statistical analysis. In this course the important topics considered include the following: the collection of statistical data; the presentation of statistical data in tabular and graphic forms; and the uses and construction of frequency distributions, averages, measures of dispersion and skewness, and the normal curve. Specific attention is given to the practical uses and limitations of statistics in the work of the industrial engineer.

2½ semester hour credits

IN 24 Industrial Statistics

Time series analysis receives major consideration in this course. The standard procedures for measuring, separating, and eliminating trend, periodic, seasonal, cyclical, and irregular movements of time series are carefully studied. Each student is required to analyze a time series related to his co-operative employment or to a field of industry in which he has especial interest. The construction of index numbers, the use of currently published index numbers, correlation, and business forecasting complete the course content. Particular regard is paid to the internal use of statistics in industrial concerns.

2½ semester hour credits

IN 25 Industrial Plants

This course includes the principles involved in the erection of an industrial plant, and the installation of its machines and equipment. Different types of structures are discussed with respect to details such as foundations, walls, columns, floors, windows, and so forth. Calculations and layout for a typical mill are carried out. Another problem consists of the calculation and layout of a machine shop which includes the power requirements and placement of machines, consideration being given to the optimum conditions of maximum production and the most efficient routing of a product.

4 semester hour credits

IN 26 Industrial Plants

This course, a continuation of IN 25, includes a problem on the heating and air conditioning of an industrial plant. The heating requirements in the winter and the cooling needs in the summer are calculated for a particular building. Another problem consists of the layout of a plant to serve a certain industry; determining the machines essential for the output of a given product; the power requirements for the plant, and the advisability of generating the power within the plant or purchasing it from outside; storage needs; arrangement of machines and material handling equipment; determination of belting sizes and shafting; and the cost of operation of the factory.

4 semester hour credits

English

E 1 English I

A course in composition with especial emphasis on exposition. Principles of grammar and rhetoric are reviewed rapidly but thoroughly. Contemporary essays are studied both for their value as models and as enrichment of the student's background. Themes on subjects largely drawn from or related to the student's life and study are a weekly requirement.

3 semester hour credits

E 2 English I

A continuation of E 1. Toward the end of the term a careful study is made of letter writing.

3 semester hour credits

E 3 Contemporary Drama

This course combines advanced work in composition with studies in contemporary drama beginning with Ibsen. Eight plays by American and European dramatists are read and analyzed. Class discussions aim to develop in the student an ability to appreciate literary values. In the assignment and correction of weekly themes, which form the basis of the work in composition, emphasis is laid on effective theme organization and precision in the expression of ideas.

2 semester hour credits

E 4 The Contemporary Novel

The novel is studied through the analysis of examples of the various types of contemporary fiction. Outside reading is an important part of the work of the course. Weekly theme writing is continued.

2 semester hour credits

Mathematics

M 1 College Algebra

The study of algebra is scheduled to begin with the solution of the quadratic equation, simultaneous quadratics, and equations in quadratic form. However, a rapid although thorough review of the fundamentals of algebra precedes this. This solution of the quadratic is followed by a detailed study of the theory of exponents. Then follow radicals, series, variation, inequalities, and the elementary principles of the theory of equations. Considerable time is given to plotting and the use of graphs in the solution of equations. The elementary theory of complex numbers is also covered.

3 semester hour credits

M 3 Trigonometry

This is a complete course in trigonometry and should enable the student to use all branches of elementary trigonometry both in the solution of triangles as well as in the more advanced courses where the knowledge of trigonometry is essential. Some of the topics covered are: the trigonometric ratios; inverse functions; goniometry; logarithms; circular measure; laws of sines; cosines, tangents, half-angles; solution of oblique and right triangles; transformation and solution of trigonometric and logarithmic equations. Considerable practice in calculation of practical problems enables the student to apply his trigonometry to problems arising in engineering practice at an early stage. Additional work, graphical and algebraic, is done with the complex number, introducing DeMoivre's theorem, and the exponential form of the complex number.

2 semester hour credits

M 4 *Analytic Geometry and Introduction to Calculus*

This being a basic course in preparation for any further study of mathematics, it requires a thorough knowledge of the fundamentals of algebra. The course covers cartesian and polar coordinates; graphs; the equations of simpler curves derived from their geometric properties; thorough study of straight lines, circles, and conic sections; intersections of curves; transformation of axes; plotting and solution of algebraic equations of higher order and of exponential, trigonometric, and logarithmic equations; loci problems. The general equation of the second degree is thoroughly analyzed in the study of conic sections. Some time is devoted to curve fitting from empirical data.

Explicit and implicit functions, dependent and independent variables, some theory of limits, continuity and discontinuity are given special attention both from the algebraic as well as geometric points of view. Some theorems on the infinitesimal are introduced and a study is made of infinity and zero as limits. Relative rates of change, both average and instantaneous, and the meaning of the slope of a curve follow. The differential and the derivative as applied to algebraic functions with the geometric interpretation is then studied. Simple applications with interesting practical problems help to develop the interest here and lay a solid foundation for the study of the calculus. The introduction of the differential at the same time with the derivative helps considerably to bridge the large gap which usually exists when the student passes from the study of the elementary analytic geometry to the infinitesimal of calculus.

5 semester hour credits

M 5 *Differential Calculus*

The differential is introduced and defined at the outset of the course together with the derivative, geometric and practical illustrations are given of both, and both are carried along throughout the course. The work in the course consists of differentiation of algebraic, trigonometric, exponential, and logarithmic functions, both explicit and implicit; slopes of curves, maxima and minima with applied problem; partial differentiation; derivatives of higher order; curvature; points of inflection; related rates; velocities, acceleration; expansion of functions; series. Although the subject matter deals with considerable theory, constant sight is kept of the practical application of the theory. The geometric interpretation of every new subject is carefully defined and problems are continually solved dealing in practical applications of the theory in geometry, physics, and mechanics.

3 semester hour credits

M 6 *Integral Calculus*

This is a continuation of Calculus M 5, and deals with integration as the inverse of differentiation as well as the limit of summation. The topics covered are methods of integration; use of integral tables; definite integrals; double and triple integrals; areas in rectangular and polar co-ordinates; center of gravity; moment of inertia; length of curves; volumes of solids; areas of surfaces of revolution; volumes by triple integration; practical problems in work, pressure, etc., depending on the differential and integral calculus for solution, solution of simpler differential equations.

3 semester hour credits

M 7 *Differential Equations*

The elementary theory of differential equations and the solution of certain ordinary and partial differential equations is offered here as a general course in mathematics. Although principally a problem course in solving differential equations, properties of the equations and of their solutions are deduced, and applications to the various fields of engineering, particularly electrical engineering, are analyzed.

3 semester hour credits

Physics

P 1 *Physics I*

A course in the study of wave motion, sound, and light. Molecular mechanics and other fundamental principles of physics are stressed at the beginning.

All lectures in physics are accompanied by appropriate demonstrations.

3 semester hour credits

P 2 *Physics I*

This is a thorough course in magnetism and electricity covering all the details within the scope of standard college texts on these subjects. All lectures are illustrated by means of lantern slides, motion pictures, and special apparatus.

3 semester hour credits

P 3 Physics II

A course in the study of the fundamental principles of the mechanics of physics. Some of the topics covered are simple harmonic motion, uniformly accelerated motion, friction, work, energy, power, fluid pressure, angular velocity, centripetal force, equilibrium under the action of a series of parallel forces and equilibrium under the action of concurrent forces.

2 semester hour credits

P 4 Physics II

The topics studied are thermometry, expansion of solids, liquids, and gases; calorimetry; change of state including latent heat of fusion and vaporization (sublimation); triple point diagram; conduction and radiation; and the mechanical equivalent of heat.

2 semester hour credits

P 5 Physics Laboratory

This course consists of experiments in mechanics, light, electricity, and magnetism performed by each student supplementing the lecture and class room work of courses P 1, P 2, and P 3. The experiments on mechanics include: the use of the vernier, micro-meters and spherometer, the calculation of true weights, the funicular polygon, gyroscopic motion, simple harmonic motion and the determination of areas by means of the planimeter. Other experiments in this course include plotting the magnetic field about a bar magnet and the determination of the pole strength and field strength of the magnet, the position of images in a combination of lenses and one experiment on electrostatics.

1 semester hour credit

P 6 Physics Laboratory

A continuation of the experiments started in P 5 including experiments on sound and heat. Some of the experiments of this course are: the modulus of elasticity, the determination of the velocity of sound, the coefficient of cubical expansion of mercury, the air thermometer, the determination of the mechanical equivalent of heat, the study of the maximum and minimum thermometers, and the use of the spectroscope in the study of the bright line and solar spectra. The experiments of this course supplement the class work of courses P 1, P 2, P 3, and P 4.

1 semester hour credit

Drawing

D 1 Graphics I

This course comprises a complete study of shape description in both orthographic and pictorial form. It provides a thorough foundation for the study of working drawings. The work is laid out according to the following divisions; care and use of instruments, lettering, geometric constructions including the conic, involute and cycloidal curves, orthographic projection including multiplanar and axonometric drawing, oblique and perspective projection, technical freehand sketching, development, screw-threads, sectioning, dimensioning, and tracing.

3 semester hour credits

D 2 Graphics II

This course comprises a complete study of the theory of projection. It is designed to develop the power to visualize and solve practical problems in spacial relations. In addition to point, line, and plane problems, the course includes a study of shadows, solid intersections, developable and warped surfaces.

3 semester hour credits

D 3 Engineering Drawing

A course similar to D 4 except that it is designed to be of particular value to students of electrical engineering.

2 semester hour credits

D 4 Machine Drawing

Detail working drawings of machine parts and assembly drawings of simple machines are made in accordance with best commercial practice. Such simple phases of mechanism as are necessary to a complete understanding of machine drawing are included in the course.

2 semester hour credits

Unclassified Courses

Ec 21 Economics

After an analysis of the main characteristics of our modern economic order, attention is turned to the fundamental economic laws and principles governing the production of economic goods, the organization of business enterprise, money, banking, the business cycle, control of the price level, and international trade. Case material is used freely.

2 semester hour credits

Ec 22 Economics

A continuation of Ec 21. The first part of the course deals with the principles of price determination under competitive and monopolistic conditions, and the principles underlying the distribution of wealth and income into wages, interest, and profits. Consideration is then given to the major aspects of the economic problems of agriculture, public utility regulation, labor, consumption, public finance, and economic reform.

2 semester hour credits

Gy 1 Geology

A study of earth movements and various terrestrial applications of solar energy. Lectures on fundamental general facts as to origin and movements of the earth, weathering, work of winds, underground and surface waters, glaciers and the glacial period, lakes and swamps, and vulcanism.

1½ semester hour credits

Gy 2 Geology

Course Gy 1 is continued with such topics as mountain formation; oceanic life, atmosphere touching upon meteorology. A considerable portion of time is given to the study of igneous, sedimentary and metamorphic rocks, supplemented by laboratory and field work.

1½ semester hour credits

PE 2 Hygiene

One class hour a week is devoted to the study of information closely related to the Physical Training work and to personal and mental hygiene. For each class lecture, the student is assigned at least one hour of outside study based on the required textbook. The course includes enough of the fundamentals of physiology and anatomy to enable the student to understand such parts of the course as require some knowledge of these subjects.

1 semester hour credit

PE 3-4 Physical Training

All first year students are required to take Physical Training. Health, strength, and vitality do not come by chance, but by constant attention to those factors involved in their development. It is very essential for the student to acquire good habits of life.

The work in the course includes a formal calisthenic program, special exercise classes for the correction of postural defects, participation in the regular athletic program, including baseball, basketball, hockey, football, track, and many types of informal games. All members of the class are also required to learn to swim.

Students wishing to be excused from Physical Training because of physical defects are required to present a petition to the faculty supported by a physician's certificate.

C 7 Engineering Conference

This course is designed to bring about analytical thinking and systematic planning of the "after-graduation-employment" problem. It is conducted as an open discussion class by the Department of Co-operative Work. Each Co-ordinator has in his class those students who have been placed and supervised on co-operative work by him. Each student analyzes and applies to himself as the "product" the fundamental principles of merchandizing. Prominent men who are leaders in the fields of employment counselling, business, or engineering present the employers' viewpoint. Thus the graduating seniors are brought face to face during the year with one of the most important and perplexing problems of life, namely, how to "sell their services," thereby aiming to bring a co-ordinated training of theory and practice to a logical conclusion.

1 semester hour credit

C 8 Engineering Conference

This course is the sequel to C-7 and consists of the practical application of the techniques of job-getting which have been analyzed and discussed in that course. It is conducted on a conference rather than on a class basis, the major portion of the time being devoted to the planning and writing of letters to and securing interviews with prospective employers. It is intended that this course will culminate in the attainment by each student of his after-graduation job.

1 semester hour credit

Thesis

Theses are not required of candidates for the bachelor's degree. Certain students, who have demonstrated marked ability in the field of research, may be permitted to substitute a thesis for one or more courses of the senior year.

By "thesis" is meant an essay involving the statement, analysis, and solution of some problem in pure or applied science. Its purpose is to demonstrate a satisfactory degree of initiative and power of original thought and work on the part of each candidate for an engineering degree.

The subject of the thesis is to be decided in conference between the candidate and that faculty member of the professional department to whom he is assigned for supervision in thesis work; final approval, however, resting with the head of the department. The subject may be one of structural design, research, testing, study of a commercial process, etc., but in no case will a mere resumé of prior knowledge and/or discussion of the present state of the matter be acceptable. This, it is true must normally be made, but in addition thereto there must be a certain amount of work planned and executed, aimed towards the extension of the present field of information regarding the subject chosen.

In many cases the student presents an individual thesis. However, in nearly equal number, acceptable subjects will be found necessitating the co-operation of at least two men, either of the same or sometimes of different professional departments. In such cases, each man is primarily responsible for a certain part of the work, while also making himself wholly familiar with the entire problem; and the completed thesis must show clear evidence of the evenly-balanced co-operation and labor of the men concerned.

The completed thesis will be examined for acceptance or rejection from the technical viewpoint by the professional departments interested, and then forwarded to the Secretary of the Day Division; final approval of the thesis resting with the Dean.

Upon acceptance, the thesis becomes the property of the University, together with all apparatus and material used in connection therewith, except that hired or borrowed, or originally the personal property of the candidate. It is not to be printed, published, nor in any other way made public except in such manner as the professional department and the Dean shall jointly approve.

Frequently thesis subjects may be chosen on problems arising in the plant where the student is employed at co-operative work. Employers are usually glad to consult with the student in the selection of the subject and the subsequent development of the thesis.

When theses are conducted in this manner, it is understood that the employer is not expected by the University to assume any expense of the thesis nor to furnish any supplies or equip-

ment to be used in the development of the thesis other than those which he may consider it advisable and desirable to place at the disposal of the students. The regulations governing the use of laboratories and buildings of the co-operating firms will vary in practically all cases and each student must naturally be governed definitely by the regulations existing at the plant where the thesis is to be conducted.

It is understood that the thesis work must not in any way interfere with the regular required co-operative work and must be done during hours distinctly outside of regular co-operative work hours unless special request is made by the co-operating firm for some other arrangement.

Theses conducted in conjunction with co-operating firms must be submitted in duplicate, one copy to be presented by the Dean to the co-operating employer.

For all further information, the candidate for the degree is referred to the "Directions for Theses," which he may obtain from his professional department at the end of his junior year.

NORTHEASTERN UNIVERSITY

DAY DIVISION

Courses of Instruction

1938-1939

Course Number	Course	Semester Hours
ACCOUNTING		
AC 1	Accounting I.....	3
AC 2	Accounting I.....	3
AC 3	Accounting II.....	2½
AC 4	Accounting II.....	2½
AC 5	Cost Accounting.....	2½
AC 6	Cost Accounting.....	2½
AC 7	Advanced Cost Accounting.....	1
AC 8	Advanced Cost Accounting.....	1
AC 9	Auditing.....	3
AC 10	Income Tax.....	3
AC 11	Advanced Accounting.....	3
AC 12	Advanced Accounting.....	3
AC 13	C.P.A. Problems.....	4
AC 14	C.P.A. Problems.....	4
BANKING AND FINANCE		
FI 3	Business Finance.....	2
FI 4	Business Finance.....	2
FI 5	Public Finance.....	3
FI 6	Corporation Finance.....	2
FI 9	Credit Analysis.....	2
FI 11	Public Utility Regulation and Finance..	2
FI 13	Bank Organization and Administration	2
FI 14	Advanced Banking Problems.....	2
FI 15	Investments.....	2
FI 16	Investments.....	2
FI 17	Insurance.....	2
FI 18	Insurance.....	2
BIOLOGY		
B 1	General Zoology.....	4
B 2	General Botany.....	4
B 3	Invertebrate Zoology.....	2½
B 4	Invertebrate Zoology.....	2½
B 5	Vertebrate Zoology.....	2½
B 6	Vertebrate Zoology.....	2½

Courses of Instruction

Course Number	Course	Semester Hours
BIOLOGY (Continued)		
B 7	General Physiology.....	2
B 8	Genetics and Eugenics.....	2
B 9	Animal Histology.....	2
B 10	Animal Histology.....	2
B 11	Vertebrate Embryology.....	2
B 12	Vertebrate Embryology.....	2
BUSINESS MANAGEMENT		
BU 1	Marketing Principles.....	2
BU 2	Marketing Principles.....	2
BU 3	Marketing Problems.....	2
BU 4	Marketing Problems.....	2
BU 7	Problems in Sales Management.....	4
BU 8	Problems in Sales Management.....	4
BU 11	Business Policy.....	2
BU 12	Business Policy.....	2
BU 13	Advertising Practices.....	2
BU 14	Advertising Problems.....	2
BU 17	Retail Merchandising.....	3
BU 18	Retail Merchandising.....	3
CHEMISTRY AND CHEMICAL ENGINEERING		
CH 1	General Chemistry.....	4
CH 2	Inorganic Chemistry.....	3
CH 9	Qualitative Analysis.....	2
CH 10	Qualitative Analysis.....	2
CH 11	Qualitative Analysis Laboratory.....	1
CH 12	Qualitative Analysis Laboratory.....	1
CH 15	Quantitative Analysis.....	1
CH 16	Quantitative Analysis.....	2
CH 17	Quantitative Analysis Laboratory.....	2
CH 18	Quantitative Analysis Laboratory.....	2
CH 21	Chemical Engineering I.....	2
CH 22	Chemical Engineering II.....	1½
CH 23	Chemical Engineering III.....	3
CH 24	Chemical Engineering IV.....	3
CH 25	Industrial Chemistry.....	1
CH 26	Industrial Chemistry.....	1
CH 27	Chemical Plant Design.....	3
CH 28	Chemical Plant Design.....	3
CH 29	Chemical Engineering Laboratory.....	1½

Courses of Instruction

Course Number	Course	Semester Hours
CHEMISTRY AND CHEMICAL ENGINEERING (Continued)		
CH 30	Chemical Engineering Laboratory	1½
CH 31	Organic Chemistry I	2
CH 32	Organic Chemistry II	2
CH 33	Organic Chemistry Laboratory I	1
CH 34	Organic Chemistry Laboratory II	1
CH 35	Industrial Organic Chemistry	2
CH 36	Industrial Organic Chemistry	2
CH 37	Organic Chemistry Laboratory III	1½
CH 38	Organic Chemistry Laboratory IV	1½
CH 41	Library Research Problems	1
CH 43	Physical Chemistry I	2
CH 44	Physical Chemistry II	2
CH 45	Physical Chemistry III	2
CH 46	Physical Chemistry IV	2
CH 47	History of Chemistry	1
CH 48	History of Chemistry	1
CIVIL ENGINEERING		
CI 3	Surveying I	3
CI 4	Surveying II	3
CI 5	Surveying, I F. & P.	1
CI 6	Surveying, II F. & P.	1
CI 7	Curves and Earthwork I	2
CI 8	Curves and Earthwork II	2
CI 9	Curves and Earthwork, I F. & P.	1
CI 10	Curves and Earthwork, II F. & P.	1
CI 12	Hydraulics	2
CI 13	Materials	1
CI 15	Theory of Structures	3
CI 16	Theory of Structures	3
CI 18	Structural Drawing	2
CI 19	Advanced Surveying	2
CI 20	Highway Engineering	2
CI 21	Sanitary Engineering I	2
CI 22	Sanitary Engineering II	2
CI 23	Engineering Structures	3
CI 24	Engineering Structures	3
CI 25	Concrete	2
CI 26	Concrete	2
CI 27	Concrete Design	1½
CI 28	Concrete Design	1½

Courses of Instruction

Course Number	Course	Semester Hours
CIVIL ENGINEERING (Continued)		
CI 29	Structural Design.....	2
CI 30	Structural Design.....	3
CI 31	Foundations.....	1
CO-ORDINATION		
C 7	Engineering Conference.....	1
C 8	Engineering Conference.....	1
C 11	Business Conference.....	1
C 12	Business Conference.....	1
DRAWING AND GRAPHIC ARTS		
D 1	Graphics I.....	3
D 2	Graphics II.....	3
D 3	Engineering Drawing.....	2
D 4	Machine Drawing.....	2
GA 5	Principles of Composition in Art.....	3
GA 6	Freehand Sketching.....	3
GA 7	History of Art.....	2
GA 8	History of Art.....	2
GA 9	Art in Industry.....	2
GA 10	Art in Merchandising.....	2
ECONOMICS		
Ec 1	Introduction to Economics.....	3
Ec 2	Economic History of the United States	3
Ec 3	Economic Principles.....	2
Ec 4	Economic Principles.....	2
Ec 5	Economic Problems.....	2
Ec 6	Economic Problems.....	2
Ec 7	Money and Banking.....	2
Ec 8	Money and Banking.....	2
Ec 9	Statistics in Business.....	3½
Ec 10	Statistics in Business.....	3½
Ec 11	Labor Problems.....	2
Ec 12	History of Economic Thought.....	2
Ec 13	Business Cycles.....	2
Ec 14	International Economic Relations.....	2
Ec 15	Advanced Economic Theory.....	2
Ec 16	Advanced Economic Theory.....	2
Ec 17	Statistics.....	2
Ec 18	Statistics.....	2
Ec 21	Economics.....	2
Ec 22	Economics.....	2

Courses of Instruction

Course Number	Course	Semester Hours
EDUCATION		
Ed 1	History of Education	2
Ed 2	History of Education	2
Ed 3	Educational Organization and Administration	2
Ed 4	Educational Measurements	2
Ed 7	Comparative Education	2
Ed 9	Educational Sociology	2
Ed 10	Educational Philosophy	2
ELECTRICAL ENGINEERING		
EL 1	Electrical Engineering I	2
EL 2	Electrical Engineering I	2
EL 3	Applied Electricity	2
EL 5	Electrical Machinery	4
EL 6	Electrical Measurements	2½
EL 9	Electrical Engineering II	2
EL 10	Electrical Engineering II	2
EL 11	Electrical Engineering Laboratory	1
EL 12	Electrical Engineering Laboratory	1
EL 13	Precision of Measurements	1½
EL 14	Electrical Measurements	2½
EL 17	Electrical Engineering III	2
EL 18	Electrical Engineering III	2
EL 19	Electrical Testing Laboratory	2
EL 20	Electrical Testing Laboratory	2
EL 22	Electrophysics	3
EL 23	Electrical Measurements Laboratory	1½
EL 24	Advanced Measurements Laboratory	1½
EL 25	Electrical Engineering IV	3
EL 26	Electrical Engineering IV	3
EL 27	A. C. Machinery Laboratory	2
EL 28	A. C. Machinery Laboratory	2
EL 29	Electrical Engineering V-A	2½
EL 30	Electrical Engineering V-A	2½
EL 31	Electrical Engineering V-B	2½
EL 32	Electrical Engineering V-B	2½
ENGLISH		
E 1	English I	3
E 2	English I	3
E 3	Contemporary Drama	2
E 4	Contemporary Novel	2

Courses of Instruction

Course Number	Course	Semester Hours
ENGLISH (Continued)		
E 7	Creative Writing.....	2
E 8	Creative Writing.....	2
E 9	Journalism I.....	2
E 10	Journalism I.....	2
E 11	Journalism II.....	2
E 12	Journalism II.....	2
E 13	Effective Speaking.....	1
E 14	Effective Speaking.....	1
E 15	Survey of English Literature.....	2
E 16	Survey of English Literature.....	2
E 17	English Drama Before Shakespeare....	2
E 18	Chaucer.....	2
E 19	Shakespeare.....	2
E 20	Shakespeare.....	2
E 21	Nineteenth Century Poetry I.....	2
E 22	Nineteenth Century Poetry II.....	2
E 23	Eighteenth Century Prose.....	2
E 24	Nineteenth Century Prose.....	2
E 25	American Literature to 1860.....	2
E 26	American Literature After 1860.....	2
E 27	History of the English Novel.....	2
E 28	History of the English Novel.....	2
E 29	Great European Writers.....	2
E 30	Great European Writers.....	2
E 31	Modern Literature 1895-1915.....	2
E 32	Post War Literature.....	2
FRENCH		
F 1	Introductory French.....	3
F 2	Elementary French.....	3
F 3	Intermediate French.....	3
F 4	Intermediate French.....	3
F 5	Advanced French.....	2
F 6	Advanced French.....	2
F 7	Readings in French Literature.....	2
F 8	Readings in French Literature.....	2

Courses of Instruction

Course Number	Course	Semester Hours
GEOLOGY		
Gy 1	General Geology.....	1½
Gy 2	General Geology.....	1½
Gy 5	Historical Geology.....	2
Gy 6	Historical Geology.....	2
GERMAN		
G 1	Introductory German.....	3
G 2	Elementary German.....	3
G 3	Intermediate German.....	3
G 4	Intermediate German.....	3
G 5	Advanced German.....	2
G 6	Advanced German.....	2
G 7	Readings in German Literature.....	2
G 8	Readings in German Literature.....	2
GOVERNMENT		
Gv 1-A	American Government and Politics....	3
Gv 2-A	American Government and Politics....	3
Gv 1	American Government and Politics....	2
Gv 2	American Government and Politics....	2
Gv 3	Municipal Government.....	2
Gv 4	Comparative Government.....	2
Gv 5	American Constitutional Law.....	2
Gv 6	American Constitutional Law.....	2
Gv 7	Origins of Political Theory.....	2
Gv 8	Modern Political Theory.....	2
HISTORY		
H 1	History of Civilization.....	3
H 2	History of Civilization.....	3
H 5	Europe, 1789-1870.....	2
H 6	Europe, 1870-1936.....	2
H 7	England to 1688.....	2
H 8	England Since 1688.....	2
H 9	The United States to 1865.....	2
H 10	The United States Since 1865.....	2
H 11	Latin American History.....	2
H 12	Latin American History.....	2

Courses of Instruction

Course Number	Course	Semester Hours
INDUSTRIAL ENGINEERING		
IN 3	Production Processes.....	2½
IN 4	Production Processes.....	1½
IN 5	Industrial Management.....	2
IN 6	Industrial Management.....	2
IN 7	Industrial Accounting.....	3
IN 8	Industrial Accounting.....	3
IN 9	Cost Accounting.....	2
IN 10	Cost Accounting.....	2
IN 11	Methods Engineering.....	2
IN 14	Industrial Finance.....	1½
IN 15	Sales Engineering.....	1½
IN 16	Personnel Administration.....	2
IN 18	Sales Engineering Problems.....	2
IN 21	Contracts.....	2
IN 23	Industrial Statistics.....	2½
IN 24	Industrial Statistics.....	2½
IN 25	Industrial Plants.....	4
IN 26	Industrial Plants.....	4
MATHEMATICS		
M 1	College Algebra.....	3
M 3	Trigonometry.....	2
M 4	Analytic Geometry and Introduction to Calculus.....	5
M 5	Differential Calculus.....	3
M 6	Integral Calculus.....	3
M 7	Differential Equations I.....	3
M 8	Differential Equations II.....	3
M 9	Higher Algebra.....	3
M 10	Curve Analysis.....	3
M 11	Solid Analytic Geometry.....	3
M 12	Modern Geometry.....	3
M 13	Spherical Trigonometry.....	3
M 14	History of Mathematics.....	2
M 15	Advanced Calculus.....	3
M 16	Advanced Calculus.....	3
M 17	Series.....	3
M 18	Theory of Equations.....	3
M 21	Business Mathematics.....	3
M 22	Business Mathematics.....	2

Courses of Instruction

Course Number	Course	Semester Hours
MECHANICAL ENGINEERING		
ME 1	Mechanism.....	3
ME 3	Mechanism of Machines.....	2
ME 13	Internal Combustion Engines.....	1
ME 13-C	Diesel Engine Principles.....	1
ME 15	Industrial Plants.....	4
ME 16	Industrial Plants.....	4
ME 20	Applied Mechanics (Statics).....	3
ME 21	Applied Mechanics (Kinetics).....	3
ME 22	Strength of Materials.....	3
ME 23	Strength of Materials.....	3
ME 24	Advanced Mechanics.....	3
ME 27	Metallography.....	2½
ME 30	Thermodynamics.....	2
ME 31	Heat Engineering.....	2
ME 32	Heat Engineering.....	2
ME 33	Refrigeration.....	2
ME 34	Steam Turbines.....	2
ME 35	Heat Engineering.....	2
ME 36	Advanced Refrigeration.....	2
ME 37	Advanced Diesel Engines.....	2
ME 38	Diesel Installation.....	2
ME 40	Power Plant Equipment.....	1
ME 42	Heating and Air Conditioning.....	2
ME 44	Power Plant Engineering.....	2½
ME 51	Machine Design.....	3
ME 51-B	Air Conditioning Design.....	3
ME 51-C	Diesel Engine Design.....	3
ME 52	Machine Design.....	3
ME 52-B	Air Conditioning Design.....	3
ME 52-C	Diesel Engine Design.....	3
ME 61	Mechanical Engineering Laboratory... ..	1½
ME 61-A	Aircraft Engine Laboratory.....	1½
ME 61-B	Air Conditioning Laboratory.....	1½
ME 61-C	Diesel Engine Laboratory.....	1½
ME 62	Mechanical Engineering Laboratory... ..	1½
ME 62-A	Aircraft Engine Laboratory.....	1½
ME 62-B	Air Conditioning Laboratory.....	1½
ME 62-C	Diesel Engine Laboratory.....	1½
ME 63	Mechanical Engineering Laboratory... ..	2½
ME 63-B	Refrigeration Engineering Laboratory..	2½
ME 63-C	Diesel Engine Laboratory.....	2½
ME 65	Mechanical Engineering Laboratory... ..	1½
ME 66	Mechanical Engineering Laboratory... ..	1½

Courses of Instruction

Course Number	Course	Semester Hours
	MECHANICAL ENGINEERING (Cont.)	
ME 68	Mechanical Engineering Laboratory...	1
ME 69	Testing Materials Laboratory.....	1
ME 70	Testing Materials Laboratory.....	1
ME 73	Aircraft Structures.....	4
ME 74	Aircraft Structures.....	4
ME 75	Aircraft Design.....	3½
ME 76	Aircraft Design.....	3½
ME 77	Aircraft Engine Design.....	4
ME 78	Aircraft Engine Design.....	4
	PHILOSOPHY	
Ph 1	Introduction to Philosophy.....	2
Ph 2	Problems of Philosophy.....	2
Ph 3	Philosophy of Religion.....	2
Ph 4	Logic.....	2
	PHYSICAL EDUCATION	
PE 2	Hygiene.....	1
PE 3-4	Physical Training.....	0
PE 5	Principles of Physical Education.....	2
PE 6	Play and Recreation.....	2
PE 7	History of Physical Education.....	2
PE 8	Administration of Physical Education..	2
PE 9	Football.....	2
PE 10	Floor and Apparatus Work.....	2
PE 11	Track and Field Events.....	2
PE 12	Basketball and Baseball.....	2
	PHYSICS	
P 1-A	Survey of the Physical Sciences.....	4
P 2-A	Survey of the Physical Sciences.....	4
P 1	Physics I.....	3
P 2	Physics I.....	3
P 3	Physics II.....	2
P 4	Physics II.....	2
P 5	Physics Laboratory.....	1
P 6	Physics Laboratory.....	1
P 9	Advanced Physics.....	3
P 10	Advanced Physics.....	3
P 11	Advanced Physics Laboratory.....	2
P 12	Advanced Physics Laboratory.....	2
P 13	Acoustics.....	2
P 14	Acoustics.....	2

Courses of Instruction

Course Number	Course	Semester Hours
PSYCHOLOGY		
Ps 1-A	Orientation Problems	0
Ps 1	Introduction to Differential Psychology	2
Ps 2	General Psychology	2
Ps 5	Educational Psychology	2
Ps 6	Psychology of Instruction	2
Ps 7	Social Psychology of Everyday Life . . .	2
Ps 8	Social Psychology, Theory and Methods	2
Ps 9	Psychology of Personality	2
Ps 10	Abnormal Psychology	2
SOCIOLOGY		
S 1-A	Introduction to Social Science	4
S 2-A	Introduction to Social Science	3
S 1	Introduction to Sociology	2
S 2	Principles of Sociology	2
S 3	Social Problems	2
S 4	Social Pathology	2
S 5	Criminology	2
S 6	Penology	2
S 7	Principles of Social Ethics	2
S 8	The Family	2
S 9	Problems in Social Ethics	2
S 10	Social Progress	2
S 11	Social Control	2
S 12	Contemporary Sociological Trends . . .	2
S 13	Sociology of Religion	2
S 14	Social Institutions	2
S 15	Population Problems	2
S 16	Urban Sociology	2
S 17	Vocational Study in Sociology	2
UNCLASSIFIED		
U 8	Legal Aspects of Business I	2
U 9	Legal Aspects of Business II	2½
U 10	Legal Aspects of Business II	2½

*Distribution of Students in Day Division Colleges
By States and Countries
1937-1938*

Massachusetts	1,637
Connecticut	91
New York	70
Maine	51
New Hampshire	30
Vermont	24
New Jersey	14
Rhode Island	10
Pennsylvania	9
Minnesota	2
North Carolina	1
Ohio	1
Wisconsin	1

Foreign Countries

Canada	2
India	1
	1,944

Directory of Students, 1937-1938

Day Division Freshmen

NAME	HOME ADDRESS
Abbott, George Craig	Peabody
Abbott, T. Grafton, Jr.	Cambridge
Abend, Charles Frederick	Wilkes Barre, Pennsylvania
Aberle, William Drew	Watertown
Abernathey, George Hubert	Spring Hope, North Carolina
Abrams, Nathan David	Revere
Adams, Alexander Philip	Boston
Adler, Bernard	Quincy
Ainslie, Henry Wilbur, Jr.	Cohasset
Akell, Robert Berry	Boston
Allen, Stanley Eugene, Jr.	Boston
Amara, Dominic	Boston
Andelman, Jack Harold	Cambridge
Andem, Wadsworth	Milton
Anderson, Charles O.	Watertown
Anderson, Earl Norman	Woburn
Andrews, Carlton R.	Belmont
Andrews, Joseph P.	Vineyard Haven
Ansell, Norris	Brookline
Archibald, Willis Kenneth	Milford
Aron, Mitchell	Mattapan
Atkinson, Arthur Arnold, Jr.	Lexington
Audet, Clement Richard	Salem
Ayers, Elwyn E.	Beverly
Babcock, Stanley Earle	Binghamton, New York
Badala, Vincent	Arlington
Bailey, Bruce P.	Reading
Bailey, Philip Hutchins	Dorchester
Ballace, Howard J.	Mattapan
Balluff, William Karl	Peekskill, New York
Barba, Robert Eugene	Newton
Barbiero, Dominick O.	Naugatuck, Connecticut
Barclay, John Edward, Jr.	Brockton
Bardwell, Charles Lamont	Hopkins, Minnesota
Bargar, Marshall	Winthrop
Barmakian, Edward Charles	Watertown
Barnes, Leonard Bucknam	Waltham
Barney, Malcolm E.	Boston
Baron, Oscar Lionell	Fall River
Barone, Joseph John	Waterbury, Connecticut
Barrese, Edwin	Somerville
Bartels, Otto George	Springfield
Bartelson, John R.	East Milton
Bartlett, Ray Hayward, Jr.	East Haven, Connecticut
Barzelay, Arthur Raymond	Malden
Batey, Arthur James	Newton Upper Falls
Baxter, John Thorwald	Waban
Begley, John Joseph	Brighton
Bell, Wilbur Carroll, Jr.	South Portland, Maine
Bell, William David	Massena, New York
Belmont, Harvey Thomas	Middleboro
Benedetto, Anthony Robert	Wakefield
Bentley, John Melvin	Waltham

NAME	HOME ADDRESS
Bernardi, Leno M.	Stonington, Maine
Better, Earle Edward	Wollaston
Blackman, Samuel Louis	Lynn
Blanchard, Earle Paine	Whitman
Bolger, John Joseph	Arlington
Bonner, William James	Potter Hill, Rhode Island
Booth, Edwin F., Jr.	Waltham
Bordwell, Collier George	Fonda, New York
Bornstein, Barnet	Dorchester
Bouldry, William W.	Roslindale
Boutelle, Warren Tallmadge	Winthrop
Boyd, Charles A.	Waltham
Bradford, William Nathaniel	Jonesport, Maine
Bray, Chester W.	Gloucester
Bridgham, Minot Austin, Jr.	Brookline
Brierley, Kenneth	Pawtucket, Rhode Island
Brintnall, Carl E.	Peabody
Broutsas, John Michael	Brattleboro, Vermont
Brown, Emery Easton	Waltham
Brown, Fred Herbert	Marblehead
Brown, Gordon Carlyle	Melrose
Brown, Gordon Herrick	Brookline
Brown, Harold Morris	Mattapan
Brown, Herbert N.	Taunton
Brown, James Douglas T.	Boston
Brown, Knowlton	Wellesley
Brown, Malcolm W.	Wakefield
Brown, Robert G.	Brighton
Brown, Robert Ivan	Barre, Vermont
Brown, Robert Lovell	Braintree
Brown, Roger Allan	Dorchester
Browne, Frederick John	Revere
Browning, Robert Albert	Norwood
Buckley, Daniel Joseph, Jr.	Malden
Bunchuck, William	Woodbine, New Jersey
Burghardt, A. Milton	South Dartmouth
Burke, Donald Ernest	Laconia, New Hampshire
Butterfield, Forrest V.	Springfield, Vermont
Buxton, Harold Ashton	Littleton
Cahill, Paul Ray	Medford
Caldwell, Leonard Augustus	Canaan, Connecticut
Call, William Russell, Jr.	Phillipsburg, New Jersey
Callery, Edward C.	Canton
Cardarelli, Anthony Joseph	Newton
Carleton, George Thomas	Haverhill
Carpenter, William Harold	East Braintree
Carroll, Warren Francis, Jr.	Waltham
Carter, Eugene Philmore	Somerville
Carter, William Nickerson	West Somerville
Caruso, William	East Weymouth
Casey, Thomas Allen	Somerset
Cassanos, D. Harry	Woburn
Castaline, Arnold Herbet	Dorchester
Caswell, Jack Howard	Ilion, New York
Chalek, Mitchell	Lynn
Chandler, Philip Coleman, II	Plymouth
Cheney, Carlton Smith	Medfield
Chilson, Homer Edward	Northampton
Chipman, John Charles	Arlington

NAME	HOME ADDRESS
Chin, Henry	Chelsea
Chipkin, Charles	New Haven, Connecticut
Chisholm, Allan Brown	East Haven, Connecticut
Chisholm, Alfred J.	Everett
Christopher, Anthony John	Revere
Church, Arthur E., Jr.	Leominster
Clark, Aubrey Elmer	Holbrook
Claypole, Arthur Herbert, Jr.	Waltham
Cleveland, Eric Guy	West Woodstock, Vermont
Cleveland, Leon Malcolm	Reading
Cobb, William Joseph	Norwood
Cochrane, Robert Gardner	Saugus
Coffin, Floyd F.	Norwalk, Connecticut
Colt, Edward	Mattapan
Conklin, Carl Russell	Winthrop
Connor, John M.	Mansfield
Conway, Joseph Lester	Lowell
Cooper, Joseph	Dorchester
Cooper, Samuel Elihu	Chelsea
Cornwell, Altamont Jay	Blasdell, New York
Cort, Robert	Dorchester
Coury, Peter	Boston
Cowan, Melvin Harold	Haverhill
Cowdry, Paul E.	Vineyard Haven
Coyle, Robert James	Waterbury, Connecticut
Creighton, James Emerson	Maynard
Crocker, Denton Winslow	Beach Bluff
Cronin, William James	Chelsea
Croom, Ishmael	Hartford, Alabama
Crossley, Norman Shepherd	Laconia, New Hampshire
Crowdis, George B.	Wollaston
Crozier, Robert Alson	Middleboro
Cudworth, Albert Nathaniel	Somerville
Cummings, Francis William	Boston
Cunningham, James L.	Lincoln
Curtis, Donald L.	Holliston
Cusick, Frederick Michael	Boston
Dacey, Edward Francis	Brighton
Daigle, Oscar Louis	Van Buren, Maine
Daley, Robert W.	Malden
Damiano, Augustino J.	Roslindale
Davidson, Lester M.	Brookline
Davis, Elbridge G.	Winchester
Davis, L. Burnham	Greenwood
Dawson, Hugh William	Revere
Deacon, Frederick Druitt	Plymouth
De Cotis, Michael Carl	Danvers
Delano, Clarence Edwin, Jr.	Plymouth
DeLouis, Pasquale Joseph	Cambridge
DeLuca, John Herbert	Stamford, Connecticut
De Minico, Joseph N.	Boston
Deneke, George E.	Mystic, Connecticut
DePiccolellis, John Philip	Boston
Dergay, Leonard Joseph	Cambridge
DeRocco, Alfred David	Brighton
DeRoche, Francis Reginald	Madison, Maine
DeRosa, Vincent P.	Somerville
Dethier, Gerard Benedict	Jamaica Plain
DeVito, Carmen H.	Brighton

NAME	HOME ADDRESS
Dickey, Gilmore C., Jr.	Belmont
Dickinson, Robert K.	Melrose
Dinsmore, Paul Ernest	Waltham
DiPietro, William O.	Watertown
Director, Philip Ronald	Cambridge
DiSesa, William Henry	Danbury, Connecticut
Doneski, Harvey J.	Cambridge
Donlon, Stephen Joseph, Jr.	Swampscott
Dorosz, Adolph Steven	Bridgewater
Dowd, James Winston	Taunton
Drevitch, Samuel	Dorchester
Driscoll, Nicholas Joseph	Jamaica Plain
Drummond, David Bernard	South Braintree
Drury, Harold Blake	Athol
Dudley, Benjamin Andrew	Marlborough
Dunn, Albert D.	New Britain, Connecticut
Durgin, Bernard Leavitt, Jr.	Haverhill
Dwyer, Francis L.	Brighton
Dwyer, Fred Thomas	Melrose
Dwyer, James Joseph	Medford
Eibel, Carl V.	Malden
Elkertson, Stanley W.	Roslindale
Elksnin, Henry	Brockton
Elliott, Edgar Henry	Thompson, Connecticut
Ellis, Calvin	Harwichport
Ellis, Charles Grant	Sagamore
Else, James Gibson, Jr.	Melrose
Erne, Ned A.	Boston
Ertel, William Raymond	Wareham
Evans, Carleton Edson	Haverhill
Everett, William Carleton	Taunton
Fallon, Thomas Francis, Jr.	North Billerica
Fallon, Robert B.	Quincy
Farren, Charles Arthur	Somerville
Fasoli, Paul Ashley	Brewster, New York
Favor, William A.	Brockton
Fee, Richard A.	Wollaston
Feely, Timothy T.	Mattapan
Feldberg, Joseph	Dorchester
Feldman, Leo	Dorchester
Feldman, Samuel	Dorchester
Field, Arthur Belcher, Jr.	Lexington
Field, Robert Allen	Boston
Finegold, David	Revere
Fish, Edward B.	Roxbury
Fishbone, Gus	Yantic, Connecticut
Fisher, Harland S.	Greenfield
Fisher, Malcolm Everett	Greenfield
Fishman, Sol.	New Bedford
Flato, Jerome C.	Boston
Flynn, Daniel Joseph, Jr.	Wakefield
Forant, Paul Raphael	Dorchester
Ford, Charles Edward	East Braintree
Foss, Frederick A., Jr.	Auburndale
Foster, Charles F.	Lynn
Fox, Myer	Everett
Fox, William, Jr.	Brockton
Freedson, Max David	Peabody
Freeman, Albin Harold	Worcester

NAME	HOME ADDRESS
Freeman, Dean	Somerville
Fuller, Willard Holdreth	Brockton
Furman, Merritt Dayton, Jr.	Steep Falls, Maine
Gailius, Joseph Charles	Chelsea
Galer, Arthur	Roxbury
Gallagher, John Cushing	White River Jct., Vermont
Galligan, Leo James, Jr.	Canton
Gantman, Sidney Donald	Dorchester
Gardner, Walter Curtis	Cohasset
Garlick, Eugene H.	Horseheads, New York
Gately, Donald Harold	Caldwell, New Jersey
Gates, Charles Edward	Belmont
Gavitt, Arnold Everett	Pawtucket, Rhode Island
Geller, Irving	Roxbury
Genaris, Paul G.	Boston
George, Edgar L.	East Dedham
Gibbs, David William	Framingham
Ginsberg, Abraham Saul	Everett
Gledhill, Samuel	Worcester
Glines, Arthur Bryant	Andover
Goldberg, Joseph Arnold	Boston
Golden, Maurice I.	Dorchester
Gomez, Anthony Alfred	East Cambridge
Goodman, Milton B.	Dorchester
Goodwin, Charles Alfred	Gloucester
Goodwin, Theodore Thomas	Framingham
Gowen, Ralph Huckins	Lynn
Grant, William J.	Winchester
Green, Alan	Watertown
Green, Harold	Malden
Green, John G.	Petersburg, New York
Green, Laurence Hardin	Arlington
Green, W. James	Ticonderoga, New York
Greenberg, Arthur Berman	Lynn
Greene, Herbert Lawrence	Melrose
Greenleaf, Francis Dodge	Foxboro
Greer, William R.	Lexington
Grillo, Charles Joseph	Gloucester
Grobman, Joseph	Beachmont
Gross, Frederick Carl	Cambridge
Grossbard, Saul	Brookline
Guastella, Samuel	Fitchburg
Gustafson, Edwin Anton	Maynard
Gustavson, Robert	Islington
Haliburton, George Mordaunt	Roslindale
Hallett, Russell Sears	Walpole
Hamilton, Earl Robert	Roslindale
Hamilton, Robert Allan	Braintree
Hand, William Spencer	East Hampton, Connecticut
Handler, Arthur	Brookline
Handy, Douglas Collins	Springfield, Vermont
Hanks, Theodore Standish	Wellesley
Hannum, Arthur Earl	Northampton
Hansen, Erland Frederick	North Abington
Hardy, Alexander George	Cochituate
Hargreaves, James Arthur	North Andover
Harris, Maceo A., Jr.	Roxbury
Hart, Gordon M.	Cambridge
Hartwell, David Wilson	Newton Highlands

NAME	HOME ADDRESS
Haskell, Arthur Cushman, Jr.	Marblehead
Hauck, Stanley Marshall	Wollaston
Hayes, Alfred Bleakney	Hyde Park
Haynes, Paul D.	Quincy
Hays, Walter Ignatus	Waltham
Hayward, Arthur William	Claremont, New Hampshire
Hayward, Carlton L.	Wellesley Hills
Hayward, Gardner Lovell	Belmont
Helbig, John Willis	Greenfield
Henderson, Austin Brown, Jr.	North Beverly
Henderson, George Clark, Jr.	Brighton
Henderson, Robert Dawson	Sherborn
Hendrickson, Rudolph	Quincy
Henshaw, George Edward	Salem
Herbert, George Edward, Jr.	Haverhill
Herlihy, John Edward, Jr.	Dorchester
Herring, John Allen	North Attleboro
Hess, Robert Chester	Meriden, Connecticut
Hill, Dana Lewis	Wollaston
Hill, John Alexander	Chelmsford
Himmelreich, Ralph C. J.	Holyoke
Hinckley, Richard Bolton	Dorchester
Hines, C. Stanley	Slippery Rock, Pennsylvania
Hirshman, Howard	Brookline
Hoey, Raymond Charles	Natick
Hoffman, Carl	Hartford, Connecticut
Hoffman, Michael Jacob	Brighton
Hofmann, Gideon	Brookline
Hojem, Robert Sefanias	West Concord
Holden, Bruce R.	Belmont
Holman, Robert Carpenter	Norwood
Hopkins, Donald H.	Plymouth
Hopkinson, Victor LeRoy	Fitchburg
Horan, John Francis	Brighton
Horgan, Frederick Raymond	West Newton
Horowitz, Milton Edward	Mattapan
Houghton, Charles Clifton	Avon
Howard, Thomas E.	Derry, New Hampshire
Howie, Malcolm Patten	Watertown
Howland, Charles Henry	Medford
Humphrey, John Francis	Waterbury, Connecticut
Hunting, Elmer Raymond, Jr.	Springfield, Vermont
Hyman, Sydney Max	Malden
Iarrobino, Joseph Mario	Swampscott
Ide, Warren Monroe	Berkley
Ingenito, Gabriel James	New Haven, Connecticut
Irish, Alfred G.	Falmouth
Irwin, Thomas William	West Roxbury
Jackson, Thomas Herbert	Quincy
Jamieson, Sydney Charles	Belmont
Jennings, Fayette	Boston
Jerzyk, Leo Chester	Salem
Jewett, George William	Bellows Falls, Vermont
Johnides, Constantine J.	Boston
Johnson, Carl Ernest	Newtonville
Johnson, Kimberley	Peekskill, New York
Johnson, Ralph Derry	North Grafton
Johnson, Winston Harding	Belmont
Juusola, Roy A.	Fitchburg

NAME	HOME ADDRESS
Kalafatas, Nicholas John	Boston
Kalayjian, Charles Haig	South Boston
Kane, Warren E.	Framingham
Kaplan, Solom	Island Park, New York
Kaprielian, Armen John, Jr.	Natick
Karsh, Ralph L.	Boston
Kasian, Aaron	Lynn
Katz, Seymour	Roxbury
Kaufman, Abraham	Boston
Kelly, Colby E.	Lawrence
Kelly, Daniel Joseph	Dorchester
Kennedy, Walter I., Jr.	Quincy
Kennington, Gordon Barrett	Winthrop
Kilroy, James Joseph	Boston
King, Joseph Vincent	Milton
Kirn, John K.	Claremont, New Hampshire
Klemm, George Houghton	New Bedford
Krasnor, Leo	Roxbury
Kuczum, Chester	Salem
Kulberg, Marshall Evald	Beverly
Kwatcher, George Henry	Roxbury
Laakso, Rudolph	Fitchburg
Ladd, Harvey Fraser	Montclair, New Jersey
Lammi, Heimo Robert	Norwood
Lancaster, Carl Richard	Newton Centre
Landman, Saul	Dorchester
Lapham, Wallace S.	Attleboro
Lariviere, Frank John	Manchester, New Hampshire
Laverty, Harold H.	Brownville, Maine
Leadbetter, Roger A.	Somerville
Lear, Daniel Mervyn	Belmont
Leary, Robert Augustus	Dorchester
Lechter, Max M.	Norwood
Ledin, Carl Winthrop	West Roxbury
Lentell, Robert Mackay	Waterbury, Connecticut
LeRoy, George H. M., Jr.	Newburgh, New York
Leslie, Albert J.	Bedford
Lettieri, Charles Joseph	Hartford, Connecticut
Levenson, Arnold Edward	Salem
Levine, David Louis	Chelsea
Levins, Melvin A.	Boston
Lewis, Joseph Edwin	Whitman
Lewis, Leonard Arnold	Wenham
Libon, Bernard L.	Roxbury
Likos, Thomas A.	South Boston
Lofgren, Arne	Hyde Park
Lomas, William W.	Framingham
Lord, James Weldon	New Bedford
Lord, Wilfred	Belmont
Lovett, John F.	Cambridge
Lynch, Thomas J.	Jamaica Plain
Lynch, William Cornelius	East Boston
Lynde, Fairfield Fowler	Walden, New York
MacFadden, Lloyd Hampton, Jr.	Auburn, Maine
MacFaden, Delbert Woodrow	North Quincy
MacIntyre, Norman Ian	Quincy
Macklin, Robert Joseph	Cambridge
Macomber, Heywood Brown, Jr.	Needham
Maddock, Albert Thomas, Jr.	Brookline

NAME	HOME ADDRESS
Magnuson, Clifford David	Braintree
Maguire, John Henry	West Roxbury
Mainini, Frederick William	Milford
Malkin, Sidney Harold	Brookline
Mandell, Leonard	Providence, Rhode Island
Maneatis, James Arthur	Lawrence
Mann, Alfred W.	North Marshfield
Marin, John C., Jr.	Cliffside, New Jersey
Markell, Joseph	Roxbury
Marks, Murray	Chelsea
Marshall, John Edward	Fall River
Marston, James William, Jr.	Brockton
Martin, Harry William	Brockton
Marzinzik, Charles Henry	Dedham
Mastracci, Frederick E.	Revere
Mazzucchelli, Joseph Louis	Dorchester
McArthur, David Charles	Quincy
McAuliffe, Kenneth W.	Duxbury
McCarron, Daniel Joseph	Everett
McCole, John James	South Boston
McCone, Thomas Robert	Roslindale
McCormack, John Francis	Arlington
McCracken, James M., Jr.	Needham
McDonald, Thomas Henry, Jr.	Salem
McDuffee, Paul Eugene	Saugus
McGoohan, William Michael	Lowell
McKeen, Robert Grant	Quincy
McLaren, John S.	Cambridge
McNally, Robert Douglas	Wellesley Hills
McNamara, William Francis	Allston
McNaught, John	Bedford
McNeil, William	Boston
McSweeney, Morgan Francis	Somerville
McQuarrie, Harry Allard	Brownville Jct., Maine
Meade, Francis G.	Brookline
Menzies, Donald Willis	Medford
Merdinyan, William Ardashes	Pawtucket, Rhode Island
Miliner, Aron Windfield	Wolfeboro, New Hampshire
Miller, George Bernard	Watertown
Miller, Phillip Glassell	Walpole
Millman, Oscar R.	Boston
Monti, Edmund Charles	Quincy
Montimaggi, Mario Francis	Plymouth
Morrissey, Allan Edward	South Weymouth
Morrison, Burton, W., Jr.	Waltham
Morrison, Clyde William	Braintree
Morrissey, David Joseph	Brookline
Morrow, Harold Francis	Somerville
Morse, Charles Phillips	Roslindale
Morse, Frank Harris	Waterford, Maine
Morton, John J., II	Magnolia
Mott, Clinton Parker	Queens Village, New York
Mozzicato, Joseph Arthur	Medford
Mroz, Edmund	Salem
Mudge, Robert Gordon	Lynn
Mudgett, Arthur Henry	Framingham
Mullen, William Brennan	Framingham
Mulock, John Franklin	Boston
Mulroy, John Joseph	Jamaica Plain

NAME	HOME ADDRESS
Mulvey, Louis B., Jr.	Cohasset
Munday, Howard Perkins	Lexington
Munroe, Richard Griggs	Waltham
Munz, Robert Earl	Peabody
Murray, Robert H.	Newton
Murray, Walter Peter	South Weymouth
Muth, Arnold Edward	Brighton
Muzzey, Harry Frank	Peterborough, New Hampshire
Myers, Elwood Ray	Wethersfield, Connecticut
Mysliwy, Edward Herbert	Salem
Naiman, Robert	Roxbury
Napoli, Francis	Lexington
Nathanson, Simon	Dorchester
Nelson, James A.	Jamaica Plain
Nelson, James H.	Gloucester
Nichols, Howard Chandler	Woburn
Noble, C. Richard	Southwick
Noonan, Hugh Joseph	Peabody
Nutting, William Cragin	Wellesley Hills
Nystrom, George Verner	Springfield
O'Flahavan, James Michael	Lowell
Ogonik, John	Boston
Oksanen, Owney David	Danielson, Connecticut
Olsen, Robert Arnold	Dover
Olsen, Walter F.	Framingham
Ordway, David Whitney	Auburndale
Ostrowsky, Jerome	Mattapan
Ouderkirk, Merton Howard	Brockton
Page, Miles Charles	Wellesley Hills
Palmer, Quentin Smith	North Weymouth
Pappas, Constantine A.	Dorchester
Paraskevas, Anastasios John	Boston
Parker, Everett Nichols, Jr.	Lewiston, Maine
Parssinen, Edwin John	Sandwich
Patterson, Charles Robert	Bridgeport
Paul, Ralph Meredith	Quincy
Pepicelli, William J.	East Boston
Perkins, William Wallace	Hingham
Perry, Waldo Everett	Holden
Perry, Walter Edward	Holden
Peterson, Carl Joseph	Brockton
Peterson, Henry	East Natick
Peterson, Stanley R.	Hyde Park
Petrocelli, Neil D.	Revere
Phelan, Joseph Bernard, Jr.	Everett
Phoenix, Walter H.	Allston
Pimentel, Jack William	Winthrop
Piper, Lloyd Russell	Roslindale
Poland, Rodney Frederick	Fitchburg
Polansky, Alfred	Salem
Policow, Paul Elisha	Roxbury
Polley, Walter Ervin, Jr.	North Chelmsford
Poltrino, Arthur Edward	Lynn
Pope, Ralph Bennette	Hull
Poslushny, Stanley	Newark, New Jersey
Potter, Andrew Burton, Jr.	Brighton
Powers, George Arthur, Jr.	Revere
Powers, George Hollis	Auburndale

NAME	HOME ADDRESS
Prager, Abraham	Revere
Priestman, Ernest Leslie	Ashland
Prior, Weston	Auburndale
Prizio, Thomas	Revere
Proctor, George Harris	Revere
Quartz, Raymond Benedict	Newton
Quirion, Jule Louis	Jackman Station, Maine
Quirk, John Dennis	Weymouth
Ramsay, James Gordon, Jr.	Melrose
Rand, Stuart Charles	Newton
Raneri, Andrew Anthony	Brighton
Rasanen, Leon Eugene Kustaa	Norwood
Raybuck, William Bentley	Montville
Raymond, Richard Franklin	Lynn
Reid, Robert F.	Taunton
Reuell, Gordon MacNeill	Woburn
Reynolds, Daniel Valentine	North Attleboro
Richardson, Kenneth Will, Jr.	Framingham
Ricker, Lincoln Pierce	Medford
Ring, Frank Aloysius	Waltham
Rizzo, Olympio Frederic	Boston
Roach, John Edward	Lynn
Roberts, Roger E.	South Hadley Falls
Robinson, Guy	Medford
Robinson, Victor Irving	Salem
Robinson, William Walter	Lynn
Roblin, Irwin	Dorchester
Rogers, Herbert J.	Arlington
Root, Stephen E.	Winchester
Rosnosky, George Winfred	Boston
Ross, George Alexander	Boston
Ross, George G.	Waltham
Rosselli, Anthony Charles	Somerville
Rovner, Samuel George	Cheslea
Rowe, Dudley Ryder	Plainfield, New Jersey
Rowell, Allan M.	Holden
Rubin, Seldon Lawrence	Winthrop
Rumsey, Abraham Herman	Dorchester
Ryan, Joseph Michael	Amesbury
Sacknoff, Norman Alvah	Brookline
Sammonds, Robert Irwin	Beverly
Sanborn, William Eugene	Cotuit
Sanford, James F., Jr.	Water Mill, New York
Santoro, Elio Anthony	Somerville
Sattin, Frank	Revere
Saunders, Arnold Ernest	Chelmsford
Sawyer, Clarence Evans, Jr.	South Portland, Maine
Sayre, Philip	Boston
Scanlon, John W., Jr.	Roslindale
Schall, Louis Henry	Dedham
Schiller, Irwin I.	Brookline
Schneiderman, Harold	Mattapan
Schober, Frank Richard	Winthrop
Scopa, Michael P.	East Boston
Seiler, Wilbur Frank	Roslindale
Semenuk, Andrew Henry	Everett
Semonian, Ralph George	Brighton
Serafini, Lelio	Quincy
Serra, Alfred J.	Boston

NAME	HOME ADDRESS
Shackford, Robert W.	Medford
Shain, Charles	Mattapan
Shank, William Richard	Boston
Sherr, Earle	Canton
Shilub, Sarkis Joseph	Springfield
Short, Dean Frederick	Taunton
Showstack, Max	Roxbury
Siegel, Ellis	Lewiston, Maine
Siegel, Sidney Joseph	Lawrence
Siegelman, Joseph	Pawtucket, Rhode Island
Silsby, Norman Stevens	Needham
Simon, Sylvan S.	Newton Centre
Simpson, Thomas W.	Cambridge
Skambas, George E.	Roxbury
Skerik, George J.	Methuen
Skelly, Thomas Francis, Jr.	Danbury, Connecticut
Skinner, Alan H.	Ashland, New Hampshire
Skoglund, Walter	Quincy
Slade, Harold Norman	Cambridge
Slavin, Ernest Francis	Winthrop
Small, Robert Franklin	Chatham
Smith, Arthur T.	Newton
Smith, Bill K.	Winthrop
Smith, Duane Sumner	Lexington
Smith, Elmer	Sabael, New York
Smokler, Jacob J.	Boston
Snell, Robert Edward	Melrose
Solomont, Stanley	Newton Centre
Soucy, Oliver Frederick	West Roxbury
Spear, L. True, Jr.	Rockport, Maine
Spellman, Thomas James	Medford
Sprowl, Edward Manning, Jr.	South Natick
Staller, Jack Joseph	Winthrop
Stead, Norman Arthur	North Andover
Steele, Charles E.	Quincy
Stefani, Louis	New York City
Stemporzewski, Henry Peter	Lowell
Stenberg, Nyyrikki	Gloucester
Stetson, Richard Milton	Farmington, Maine
Stewart, Warren Duncan	Wollaston
Stirling, William Herbert, Jr.	Fitchburg
Stone, Lawrence	Nantasket Beach
Stone, Merrill	Taunton
Stone, Ralph Winship	Springfield
Stone, Robert Wellman	Auburn
Stone, Walter Everett	Bridgeport
Streeter, Milton H.	Barnardston
Stumpus, James	Boston
Sullivan, Francis	Wellesley
Sullivan, John Redmond	West Roxbury
Sutliff, Richard Dewitt	Gloversville
Swift, Charles Beal, Jr.	Taunton
Symonds, Dale E.	Jasper, New York
Takvorian, Ephraim	Cambridge
Taloumis, George P.	Salem
Taylor, Douglas	Oakland, Maine
Taylor, Edward S.	Wellesley
Taylor, James	Brownville Junction, Maine
Taylor, William I.	Fitchburg

NAME	HOME ADDRESS
Tevlin, Thomas J.	Lowell
Thayer, Calvin Clyde	Ghent, New York
Theodore, Harry	Boston
Thomas, Robert Harry, Jr.	Bellows Falls, Vermont
Thompson, Edward Bourne	Boston
Thompson, Harry Garfield, Jr.	Medford
Tidd, Ellsworth Hartley	Georgetown
Titus, Ernest Wesley	Canton
Tobey, Benjamin	Falmouth
Tongue, Charles Henry	Bright Waters, New York
Toste, Salvatore Augustus	Belmont
Treadwell, Nellis Sherwood	Southport, Connecticut
Tubbs, Ronald E.	Hartford, Connecticut
Tuffin, George E.	West Hartford, Connecticut
Tweddle, Henry, Jr.	Medford
Urban, John Alexander	Pittsfield
Urbanik, Walter Casimir Francis	Dorchester
Urbanowicz, Arthur	Buffalo, New York
Van De Carr, Le Roy, Jr.	Craryville, New York
Varca, Charles Philip	Glastonburg, Connecticut
Varney, Fenton Winchester	Scituate Centre
Vautrinot, Donald	Hull
Vedoe, John D.	Wollaston
Vickery, Ralph Leslie	Brighton
Vikre, Ole Berner, Jr.	Brighton
Villegas, Ernest	Boston
Violet, Robert F.	Maynard
Wahl, Louis Gerard	Malden
Waite, Donald Millman	Concord
Waite, Norman Philip	Leeds, Maine
Walden, R. Edison	Roxbury
Wall, George Edward	Lynn
Walsh, James J.	Fall River
Warden, John Douglas	Ashaway, Rhode Island
Warshaw, Melvin	Roxbury
Waterman, Charles Hamlin	South Portland, Maine
Waxman, Samuel	Chelsea
Weaver, Thurlow Ray	Frankfort, New York
Webber, Roland Alvin	Boston
Weinstein, Robert	North Plainfield, New Jersey
Weintraub, William	Newburyport
Wells, Edward Lathrop	Randolph
West, Charles F.	Cambridge
West, Kenneth Paul	Allston
West, Thomas, Jr.	Belmont
White, James John	Dorchester
White, William Thomas, Jr.	Lynn
Whitney, Gordon Bernard	Westminster
Whitney, Lawrence Edward	Union, Maine
Wilder, Roger Colby	Melrose
Wilke, John Robert	Everett
Willard, Emery Durgin	Swampscott
Williams, Dean	Arlington
Williams, Eugene Robie	Winthrop
Williams, Gardner Raymond	Kensington, Connecticut
Williams, Herbert Charles, Jr.	Cohasset
Williams, Matt O.	Ilion, New York
Williams, Walter Lawrence	Boston
Wills, Robert Henry, Jr.	Wollaston

NAME	HOME ADDRESS
Wilson, Albert Thomas Leslie	Medway
Wiren, Jacob	Westwood
Wiseblood, Philip	Haverhill
Withington, Charles Frederick	Malden
Wolf, John M.	Greenwich, Connecticut
Wolfendon, William	Methuen
Wolfson, Jason L.	Brighton
Woloshuk, Walter	Mattapan
Wood, Richard M.	Stoneham
Woodbury, Edgar Harvey	Littleton
Woodworth, John Desmond	Framingham
Wright, Russell Calvert	Melrose
Wyman, Robert Eaton	Boston
Yaffee, Philip	Malden
Yager, Edward	Buffalo, New York
Yetman, Joseph Gerard	Belmont
Young, Donald James	Roslindale
Young, John Scholl	Belmont
Yuryan, Joseph Bernard	Hudson
Zax, Samuel	Roxbury
Zelinsky, Richard Milton	Haverhill
Ziegler, William Ralph, Jr.	Dorchester

Day Division Upperclassmen, 1937-1938

NAME	COLLEGE CLASS	ADDRESS
Adams, Leonard K.	B.A. 1941	West Concord
Adams, Robert B.	Eng. 1941	Dalton
Agocs, Stephen	B.A. 1941	East Lynn
Agurkis, Walter	Eng. 1938	Allston
Ahern, Andrew K.	Eng. 1941	Winthrop
Ahlquist, Arthur R.	Eng. 1938	Gloucester
Akers, Guy L.	Eng. 1939	Weston
Albano, Alfonso Anthony	Eng. 1941	Springfield
Alexander, Herbert C.	Eng. 1941	Medford
Alkon, Harold Alfred	B.A. 1941	Brighton
Alla, Francis Vincent	Eng. 1939	Medford
Allen, Lyman S.	Eng. 1941	Gloucester
Allen, Merrill Shove	Eng. 1939	Walpole
Allen, Russell Eldridge	Eng. 1941	Westboro
Allicon, Phillip Askew	L.A. 1941	Quincy
Allwood, Edwin G.	L.A. 1938	Everett
Almgren, Carl F.	Eng. 1940	Milton
Almstrom, Eric Gustav	Eng. 1940	Quincy
Ames, Richard	Eng. 1941	Milton
Anderson, Alf Edward	Eng. 1941	Milton
Anderson, Arthur Leonard	Eng. 1939	North Easton
Anderson, Arthur S.	L.A. 1941	Concord
Anderson, Richard E.	Eng. 1940	Stockholm, Maine
Anderson, John W.	B.A. 1939	Belmont
Anderson, Robert D.	Eng. 1940	Belmont
Andrews, Carl F.	Eng. 1941	Boston
Ankstitus, John Peter	Eng. 1941	Worcester
Antonelli, Pasquale	B.A. 1939	Boston
Antonuccio, Joseph	Eng. 1941	Somerville
Apolis, John J.	Eng. 1940	South Boston
Apostolu, George J.	B.A. 1941	Nantasket
Applebaum, Harold L.	L.A. 1941	Brookline

NAME	COLLEGE CLASS	ADDRESS
Archer, Robert S.	Eng. 1939	Middleboro
Archibald, Francis R.	Eng. 1941	Dorchester
Arbia, Patsy J.	L.A. 1941	East Boston
Arduini, N. A.	Eng. 1939	White River Jct., Vermont
Armstrong, George Henry	Eng. 1941	Windham, New Hampshire
Aron, Nathan	Eng. 1940	Mattapan
Attridge, Gerry T.	Eng. 1941	Pepperell
Atwood, Frank W.	Eng. 1939	Terryville, Conn.
Atwood, Irving H., Jr.	Eng. 1940	Haverhill
Austin, Robert	Eng. 1939	Orleans, Vermont
Avanzino, Paul, Jr.	Eng. 1939	Watertown
Babel, Paul	Eng. 1938	Brighton
Bailey, Paul F.	B.A. 1939	East Braintree
Baillie, George H.	Eng. 1940	Somerville
Baines, Harry Alfred	Eng. 1941	Framingham
Baker, Albert E.	Eng. 1940	Malden
Baker, Arthur G.	Eng. 1939	Adams
Baldasaro, John	B.A. 1941	Newton
Bamber, John Edward	Eng. 1941	Norwood
Banks, Frederick	L.A. 1941	Belmont
Barbour, Charles W., Jr.	Eng. 1941	Portland, Maine
Barone, John A.	Eng. 1938	New Haven, Conn.
Barrasso, Ernest V.	B.A. 1940	East Boston
Bartlett, Arnold S.	B.A. 1941	Eliot, Maine
Bartlett, Robert W.	Eng. 1941	South Boston
Barzelay, Martin E.	Eng. 1939	Malden
Bassett, Nilsson S.	Eng. 1941	Marblehead
Bates, Everett Ellsworth	Eng. 1941	Marblehead
Baxter, Douglas F. I.	Eng. 1941	Auburndale
Beake, Laurence I.	Eng. 1941	Somerville
Beale, George W.	B.A. 1940	Needham
Bean, John Leslie	Eng. 1940	Ayer
Bearcovitch, Aaron	Eng. 1941	Mansfield
Beaton, Joseph P.	B.A. 1941	Dorchester
Beaton, Roy Howard	Eng. 1939	Stoughton
Beck, Andrew Conrad	Eng. 1938	St. Johnsbury, Vermont
Bedford, G. Leighton	B.A. 1941	Belmont
Beebe, Robert J.	Eng. 1941	Newton Centre
Beecher, William S., Jr.	Eng. 1941	Wollaston
Beer, Gerard Rolleston	Eng. 1941	Dorchester
Benjamin, George Francis	Eng. 1941	Somerville
Benjamin, William Henry	B.A. 1938	West Goshen, Connecticut
Bennekorn, Carl	Eng. 1940	Arlington
Bennett, Harry W.	Eng. 1941	Somerville
Benson, Ralph G.	Eng. 1939	Roslindale
Benson, Vincent F.	Eng. 1939	Dorchester
Benson, Warren Milton	Eng. 1941	North Easton
Berestka, Edward S.	Eng. 1941	Easthampton
Berkeley, Austin W.	Eng. 1941	Newton Centre
Berger, Abraham	B.A. 1941	Dorchester
Bergner, Alvin M.	B.A. 1940	White Plains, New York
Bergner, Arthur William	Eng. 1941	Lowell
Bergstrom, Carl Henry	Eng. 1941	Hyde Park
Bertasch, Michael E.	B.A. 1941	Hinsdale, New Hampshire
Berzof, Harold	Eng. 1939	Roxbury
Bierenbroodspot, Andrew	Eng. 1940	Lexington
Billings, Sanford M.	Eng. 1941	Hazardville, Conn.
Bilsky, Merton	B.A. 1941	Nantucket
Bischoff, Lewis Birdsey	Eng. 1941	Hamden, Connecticut

NAME	COLLEGE CLASS	ADDRESS
Bishop, Burnett, W.	Eng. 1939	Boston
Bjorkman, Roy K. A.	Eng. 1941	Lynn
Blake, Vincent F.	Eng. 1938	Woburn
Blanchard, Norman W.	Eng. 1941	Dalton
Bliss, Herbert Frederic	Eng. 1941	Taunton
Bliss, Zenas W.	Eng. 1939	Wakefield
Bly, Belden G., Jr.	L.A. 1941	Revere
Bodnar, John	Eng. 1938	Bridgeport, Conn.
Bonanno, Walter Joseph	Eng. 1941	Dorchester
Boncoddo, Nicholas Frank	Eng. 1938	Watertown
Bonnymman, Harold R.	B.A. 1938	Newton Centre
Boudreau, John S.	Eng. 1940	Gloucester
Bouldry, John M.	Eng. 1941	Roslindale
Bowen, Harry D.	Eng. 1941	Somerville
Bowie, Harrison E.	Eng. 1939	Jamaica Plain
Boyajian, John Harry	L.A. 1941	Melrose
Bracken, Gerald F., Jr.	Eng. 1941	Watertown
Bravacos, George John	B.A. 1940	Woburn
Bravacos, Louis James	Eng. 1941	Woburn
Brebner, James W.	B.A. 1939	Boston
Brennan, Jack R.	Eng. 1940	Mineville, New York
Brennan, Richard J.	Eng. 1940	Mineville, New York
Bresnahan, William A.	L.A. 1939	Beverly
Briand, Robert L.	Eng. 1941	South Braintree
Brigham, Eric T.	B.A. 1941	Brookline
Brittain, Harvey	Eng. 1938	Springfield
Bromley, Vorman A.	B.A. 1941	Granville, New York
Bronson, George Edward	Eng. 1939	Brookline
Brookfield, Richard Alan	Eng. 1941	Sharon
Brooks, Lorimer Page	Eng. 1939	North Dana
Brown, Elliot M.	Eng. 1939	Pawlet, Vermont
Brown, Harold F.	Eng. 1940	Dorchester
Brown, Richard E.	B.A. 1941	Lynn
Brown, Robert H.	Eng. 1939	Boston
Bruce, Harold Wellington	Eng. 1941	Avon
Bruce, Lawrence H.	Eng. 1940	Wakefield
Brudzynski, Alfred J.	Eng. 1938	Salem
Bukala, Jacob Richard	B.A. 1940	Lowell
Burke, William A.	B.A. 1941	Brighton
Burns, Ralph W.	Eng. 1941	Marlboro
Burrell, Williard A.	Eng. 1941	Rockland
Burt, Carleton H.	Eng. 1939	West Hartford, Connecticut
Burt, Gardner L.	B.A. 1939	Waltham
Burton, Milton Campbell	L.A. 1941	New Ipswich, New Hampshire
Bustead, William J.	Eng. 1941	Burlington
Byrne, John Rowan	L.A. 1940	Arlington
Byrnes, Alfred J.	B.A. 1938	Newburyport
Cadogan, John B.	Eng. 1938	Revere
Cahill, James	B.A. 1939	West Newton
Cahoon, Charles D.	Eng. 1939	Lynn
Camera, John L.	Eng. 1939	Oak Bluffs
Campbell, Henry	Eng. 1938	South Boston
Cannava, Santo J.	B.A. 1940	Medford
Canney, Charles Goodhue	Eng. 1938	Ipswich
Caputo, Americo A.	Eng. 1941	East Boston
Carbonaro, Philip A. G.	Eng. 1939	Dorchester
Carmichael, Harold A.	Eng. 1938	Duluth, Minnesota
Carosi, Alfred C.	Eng. 1941	Quincy
Carpano, Vincent A.	Eng. 1940	Fall River

NAME	COLLEGE	CLASS	ADDRESS
Carpenter, Robert D.	Eng.	1941	Waltham
Carpenter, Vernon F.	Eng.	1941	Sandy Creek, New York
Carr, Gerald	Eng.	1940	Bath, Maine
Carr, Ralph S., Jr.	Eng.	1941	Concord, New Hampshire
Caruso, Joseph J.	Eng.	1938	Roslindale
Cassanos, James G.	L.A.	1940	Woburn
Cassidy, Ellsworth S.	B.A.	1941	Braintree
Cegelski, Joseph J.	Eng.	1941	New Haven, Connecticut
Cerda, Arthur Lionel	Eng.	1938	Middleboro
Chaffee, Robert E.	Eng.	1941	Belmont
Chamberlain, Charles Leonard	Eng.	1938	Poughkeepsie, New York
Chambers, William H.	Eng.	1938	East Dedham
Chapman, David William	B.A.	1941	Braintree
Charles, Williard C.	B.A.	1941	Amesbury
Chase, Marcel, E.	B.A.	1939	Allston
Chase, W. Raymond	B.A.	1941	Monument Beach
Chatterton, Earl Leslie	Eng.	1941	Pawtucket, Rhode Island
Chechames, Arthur H.	Eng.	1941	Cambridge
Cheney, Raymond Prescott, Jr.	Eng.	1940	Saugus
Chesley, Raymond G.	L.A.	1941	Wakefield
Chiarappa, Richard Joseph	B.A.	1938	Middletown, Connecticut
Childers, Oliver W.	L.A.	1938	Roxbury
Childs, Fred L.	B.A.	1941	Framingham
Chipman, John F.	Eng.	1938	South Weymouth
Chipman, Robert Hennessey	Eng.	1941	Cambridge
Cidulka, Leo	L.A.	1941	Boston
Clancy, John J.	Eng.	1941	Millis
Clancy, Joseph F.	Eng.	1939	West Roxbury
Clark, Willard Douglas	Eng.	1941	East Boston
Clauson, Karl A.	B.A.	1941	Springfield
Clement, Philip H.	Eng.	1939	Dover-Foxcroft, Maine
Clendineng, Richard B.	Eng.	1938	Springfield
Cleveland, Emmet G.	L.A.	1941	Boston
Cleveland, Norman	Eng.	1939	Beverly
Cline, Penneth M.	Eng.	1940	Roxbury
Coffin, Clifford Henry	Eng.	1940	Marshfield
Cogan, John J.	L.A.	1941	Dorchester
Coghlan, Frank D.	Eng.	1941	Dorchester
Cohan, George	B.A.	1941	Malden
Cohen, Leonard B.	Eng.	1941	Dorchester
Cole, Albert J.	L.A.	1940	West Roxbury
Cole, Arthur E.	L.A.	1940	East Lynn
Cole, Lawrence C.	L.A.	1940	Melrose
Cole, Warren E.	Eng.	1938	Framingham
Coleman, Cedric F.	Eng.	1938	Plymouth
Coleman, Ralph Arthur	Eng.	1941	Quincy
Collatos, Constantine	L.A.	1941	Boston
Colligen, James	L.A.	1939	Newtonville
Combella, Earle M.	Eng.	1940	Augusta, Maine
Comminos, George	Eng.	1940	Lynn
Comstock, Alfred N.	Eng.	1939	Norwalk, Connecticut
Conant, David P.	Eng.	1938	Greenfield
Condon, Joseph Linwood	Eng.	1938	Rockland
Conlan, Emmett P.	Eng.	1939	Attleboro
Conlin, Daniel J.	Eng.	1940	West Roxbury
Connolly, George F.	B.A.	1940	Boston
Connolly, James Joseph	B.A.	1940	Waltham
Connolly, Robert Joseph	Eng.	1938	West Medway
Cook, Adam Morris	Eng.	1938	Lynn

NAME	COLLEGE	CLASS	ADDRESS
Cook, Frank B.	Eng.	1941	Allston
Cook, James A.	Eng.	1939	Allston
Cook, John L.	B.A.	1941	Wellesley
Copeland, Gordon E.	B.A.	1941	Quincy
Corcoran, William J.	Eng.	1940	Brighton
Corey, Roger Lyman	Eng.	1940	Canton
Cornelissen, Richard F.	Eng.	1939	Dorchester
Coronella, Francis S.	Eng.	1938	Boston
Cornwall, Leonard Peter	L.A.	1940	Winchester
Corrigan, Thomas Joseph	Eng.	1941	Hyannis
Corson, W. Bradley	B.A.	1940	Rochester, New Hampshire
Cotter, Robert W.	Eng.	1938	Lynn
Cotton, Paul E.	Eng.	1941	Worcester
Coughlin, Bernard J.	Eng.	1941	Greenfield
Coughlin, Joseph Francis	Eng.	1941	Norwood
Coulouris, John William	Eng.	1938	Arlington
Crescenzo, Francis	Eng.	1938	Springfield
Crispell, Herbert P.	Eng.	1940	Binghamton, New York
Crocetti, William A.	Eng.	1940	Steubenville, Ohio
Croll, Irving	Eng.	1941	Chelsea
Cronan, Calvin Shaw	Eng.	1940	Newtonville
Cronin, John J.	B.A.	1941	Hyde Park
Crosby, Gardner	B.A.	1939	Wollaston
Crowell, Baron H., Jr.	B.A.	1941	Westboro
Crowther, Ralph F., Jr.	Eng.	1941	Framingham
Crumb, Lloyd	Eng.	1941	Leonardville, New York
Crump, Raymund T.	Eng.	1938	Rosindale
Cryder, Edward H.	Eng.	1940	Wakefield
Cullen, James H.	B.A.	1941	Boston
Cumming, George John	B.A.	1940	Lowell
Cunnare, Francis H.	Eng.	1941	Waltham
Cunningham, Gerald F.	Eng.	1940	Haverhill
Cunningham, John Joseph	Eng.	1940	Saugus
Cunningham, Ralph L.	Eng.	1940	Winthrop
Curcio, Anthony P.	Eng.	1938	Cos Cob, Connecticut
Curran, Robert J.	B.A.	1939	Littleton, New Hampshire
Curran, Robert Joseph	L.A.	1941	Lynn
Curtis, Richard R.	Eng.	1940	Lynn
Cushman, Howard R.	Eng.	1940	South Attleboro
Cushman, George S.	Eng.	1941	Fall River
Cushman, Warren H.	Eng.	1938	Swampscott
Cuzner, Frank Crockett	Eng.	1939	North Easton
D'Agata, Samuel J.	B.A.	1941	Lawrence
Dagle, Arthur F.	B.A.	1939	Dorchester
Daley, John Joseph	L.A.	1941	Wakefield
Damassa, Frank R.	Eng.	1939	Alliquippa, Pennsylvania
Danburg, Abraham	Eng.	1941	Boston
Danforth, Paul Chace	Eng.	1939	Danvers
Daniels, Robert Monroe	Eng.	1940	Newton
Darling, George Thomas	Eng.	1940	Norwood
Daum, Arnold E.	B.A.	1940	Roxbury
Davenport, Ralph H.	B.A.	1941	Newton Centre
Davidson, Warren E.	Eng.	1938	Temple, New Hampshire
Davis, Alfred Sherman, Jr.	Eng.	1939	Waban
Davis, Arnold B.	Eng.	1939	Newtonville
Davis, Arthur E.	B.A.	1941	Norwood
Davis, Austin E.	Eng.	1938	Gloucester
Davis, Carl C., Jr.	Eng.	1941	Newtonville
Davis, Ronald C.	L.A.	1940	Quincy

NAME	COLLEGE	CLASS	ADDRESS
Dearstyne, Frederick J.	B.A.	1940	Albany, New York
DeAvellar, Joseph I.	L.A.	1941	Quincy
Decker, Wilmot Hunter	Eng.	1940	Greenwood
Deibert, Clarence R.	L.A.	1940	Valley View, Pennsylvania
DeLoria, Eugene J.	L.A.	1940	Dedham
DeLuccia, Charles A.	Eng.	1938	Everett
DeNapoli, Gerard R.	Eng.	1941	Newton
DePina, Edward Joseph	Eng.	1941	Norwich, Connecticut
DeRoeck, Frank Richard	Eng.	1939	Dorchester
Devine, Joseph M.	Eng.	1940	Somerville
DiCara, Salvatore V.	B.A.	1941	Dorchester
DiCicco, Minotti	Eng.	1938	Concord
Dickinson, Albert D.	Eng.	1938	Bridgewater, Connecticut
Dickinson, Robert H.	Eng.	1939	Bridgewater, Connecticut
Dickson, Walter Francis	Eng.	1938	Arlington
Diette, Ernest J.	Eng.	1940	New Haven, Conn.
DiLorenzo, Carmen	B.A.	1939	East Boston
Dimitri, Sevo John	Eng.	1940	Taunton
Dimmick, Herbert R., Jr.	L.A.	1941	Hyde Park
DiNostri, Anthony Arnold	Eng.	1938	New Haven, Connecticut
DiNozzi, Guido	Eng.	1940	Boston
Dion, Raymond O.	Eng.	1941	Salem
Dionne, Arthur Louis	Eng.	1939	Walpole
Dixon, George Walter	B.A.	1941	Squantum
Dixon, Robert Alan	Eng.	1941	Malden
Dobbin, Rollins Eugene	L.A.	1941	Jonesport, Maine
Doherty, Leo F.	Eng.	1941	Revere
Donahue, Patrick H.	Eng.	1941	Milton
Donati, Theodore	Eng.	1938	Everett
Donelson, George R.	Eng.	1941	North Hatfield
Dovi, Anthony C.	Eng.	1938	Boston
Dowling, John H.	Eng.	1941	Boston
Downing, John J.	Eng.	1941	Roslindale
Drinkwater, Robert B.	Eng.	1940	Needham
Drummev, William W.	L.A.	1938	Jamaica Plain
Dunlavy, Frank J., Jr.	Eng.	1941	Wollaston
Dunn, Albert A., Jr.	Eng.	1940	Allston
Dwyer, Russell N.	Eng.	1938	Jamaica Plain
Dyer, William Bradford	L.A.	1939	Auburndale
Dyer, Charles Francis	Eng.	1939	Melrose
Earus, Chester Walter	Eng.	1941	Chelsea
Easton, Ivan G.	Eng.	1938	Rockport
Eckert, John Otto	Eng.	1941	Greenwood
Eckler, Norman H.	Eng.	1941	Hegins, Pennsylvania
Edwards, Alan Rice	L.A.	1941	Patchogue, New York
Elkins, Irwin	Eng.	1941	Allston
Ellis, Franklin F.	Eng.	1941	Norwood
Ellis, Robert O.	Eng.	1941	Rangeley, Maine
Ellsworth, William	Eng.	1941	Binghamton, New York
Emerson, Denley W.	L.A.	1941	Brookline
Emerson, Randolph W.	Eng.	1938	Rowley
England, William H.	Eng.	1940	Dorchester
Erickson, Arthur H.	B.A.	1940	Braintree
Etzel, Simon F.	Eng.	1941	New Haven, Connecticut
Fabrizio, Angelo Louis	Eng.	1941	Waltham
Falkoff, Bernard N.	L.A.	1940	Rochester, New York
Fallon, Kenneth P., Jr.	B.A.	1941	Wollaston
Fallows, Ernest M.	Eng.	1941	Quincy
Falls, Warren H.	Eng.	1938	Lynnfield

NAME	COLLEGE CLASS	ADDRESS
Farley, George F.	Eng. 1941	Dorchester
Fay, Eldon T.	Eng. 1939	Watertown
Feidt, William E.	Eng. 1939	Boston
Feinberg, Milton I.	Eng. 1941	Boston
Feinberg, William	Eng. 1941	Brockton
Feinberg, Sidney L.	B.A. 1941	Dorchester
Feldman, Morris	B.A. 1938	Winchendon
Fennell, Arthur Richard, Jr.	Eng. 1938	Everett
Ferguson, Donald O.	Eng. 1940	New London, Connecticut
Ferguson, Harry James	Eng. 1941	Roslindale
Ferguson, Robert Ireland	Eng. 1938	Adams
Field, Elroy A.	Eng. 1938	Lowell
Fielding, Robert J.	B.A. 1939	Brighton
Figlioli, Aldo R.	B.A. 1941	Meriden, Connecticut
Fillebrown, Carter, Jr.	Eng. 1941	Wollaston
Finkle, Earl	Eng. 1941	Everett
Finos, Valentino R.	B.A. 1938	New Haven, Connecticut
Firth, James A.	B.A. 1938	Scarsdale, New York
Fish, Charles Herbert	Eng. 1938	Waltham
Fisher, Irving	Eng. 1940	Allston
Fitzgerald, John Joseph	B.A. 1940	Charlestown
FitzGibbons, John Edward	Eng. 1940	Taunton
Flanagan, John J.	Eng. 1941	Malden
Flowers, William R.	Eng. 1941	Brockton
Flumere, Emanuel A.	L.A. 1940	Frammingham
Flumere, John A.	L.A. 1939	Natick
Forbes, George F.	L.A. 1939	Arlington
Forman, Sidney	B.A. 1938	Dorchester
Forte, Jack A.	B.A. 1939	Noroton Heights, Connecticut
Fosdick, Roger W.	Eng. 1940	West Roxbury
Foster, Dan Louis	Eng. 1938	Waltham
Forzley, Victor G.	Eng. 1941	Worcester
Frail, Donald Albert	B.A. 1940	Montpelier, Vermont
Fraser, Alexander Daniel	B.A. 1938	Milton
Frazier, Andrew D.	L.A. 1941	South Boston
Freeman, Albert W.	Eng. 1940	Hollis, New Hampshire
Freeman, Emery Eugene, Jr.	Eng. 1940	Cohasset
Freeman, Harry L.	Eng. 1939	Roxbury
Freeman, Lawrence A.	L.A. 1940	Suncook, New Hampshire
Freeman, Zussman	B.A. 1941	Roxbury
French, Hector E.	Eng. 1941	Carlisle
French, Milton R.	Eng. 1941	Beverly
Frizzell, B. George	B.A. 1940	Wakefield
Fullam, Harland	Eng. 1939	Westminster, Vermont
Fuller, Everett H.	Eng. 1940	East Walpole
Fulvi, Renato J.	Eng. 1939	Mansfield
Funicello, Joseph T.	B.A. 1938	Darien, Connecticut
Gaffney, Bernard J.	Eng. 1940	Winchester
Gage, Edwin Bradley	B.A. 1940	Newport, Vermont
Gagne, Wilfred N.	Eng. 1940	Fairfield, Connecticut
Gaidosz, Daniel S.	Eng. 1938	Derby, Connecticut
Galanopoulos, William P.	Eng. 1939	Dorchester
Gallagher, Thomas C.	B.A. 1941	South Acton
Galloway, Jay D.	Eng. 1941	Hamburg, New York
Gamble, Reginald Eldon	L.A. 1941	St. Martin's, Canada
Ganong, Curtis Roy	Eng. 1940	Arlington
Ganzert, Frank H.	Eng. 1938	Dorchester
Gardner, Ralph W.	Eng. 1939	South Weymouth
Gardner, Robert E.	Eng. 1938	Boston

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Garland, Chesley F.	Eng.	1938	Belmont
Garnsey, Bruce	Eng.	1938	Pleasantville, New York
Gately, Richard J.	B.A.	1941	Brighton
Gauld, Edward	Eng.	1940	Brookline
Gediman, Frank D.	Eng.	1941	Roxbury
Geller, Sidney N.	Eng.	1941	Dorchester
Gemelli, Joseph	B.A.	1939	Dorchester
Georgalos, James	Eng.	1941	East Boston
Germanic, Morris	B.A.	1941	Boston
Gerry, David Cameron	Eng.	1941	Topsfield
Giard, Joffre R.	Eng.	1941	Greenfield
Gibson, Arthur E.	Eng.	1938	Dorchester
Gibson, Garnet Lancelot, Jr.	L.A.	1940	Salem
Gibson, William L.	Eng.	1939	Boston
Gilbert, Joshua M.	L.A.	1938	Roxbury
Gilbert, Norman Everett	Eng.	1938	Boston
Giles, James Edward	Eng.	1940	Newburyport
Gill, John G.	Eng.	1941	West Newton
Gill, John J.	Eng.	1940	Brighton
Gilman, Arthur E.	Eng.	1939	Newburyport
Ginsberg, Sumner N.	L.A.	1941	Dorchester
Ginther, Robert J.	Eng.	1940	Lewiston, Maine
Gisiano, Giacinto	L.A.	1941	Highland, New York
Glaskin, Norman	Eng.	1938	Mattapan
Glass, Hyman Alfred	Eng.	1940	Roxbury
Gleason, Thomas L.	B.A.	1941	Stratford, Connecticut
Glidden, James P.	Eng.	1941	Belmont
Glover, Francis H.	Eng.	1939	Roslindale
Goddess, Matthew	Eng.	1940	Mattapan
Gogolin, Robert T.	Eng.	1940	Maynard
Goldthwaite, Wendall L.	L.A.	1941	Everett
Goldsmith, Melvin	B.A.	1941	Brookline
Golemme, Joseph Manuel	B.A.	1938	Hanover
Goodson, George W.	Eng.	1938	Waterbury, Connecticut
Goodwin, Albert E.	Eng.	1941	Lynn
Goodwin, Bertram R.	Eng.	1938	Gloucester
Gordon, Charles J.	L.A.	1941	Boston
Gordon, Emanuel	Eng.	1941	Malden
Gordon, James D.	Eng.	1941	Weymouth
Gorman, Fred	Eng.	1940	Wellesley
Gorse, James Franklin	B.A.	1938	Lynn
Gove, Robert A.	Eng.	1941	Newburyport
Grady, Walter T.	Eng.	1940	Roslindale
Graham, Alexander C.	Eng.	1938	Woburn
Grant, Charles Elmer	Eng.	1939	Sharon
Grant, Charles T.	Eng.	1938	Hyde Park
Grant, Wesley Irwin	B.A.	1938	Wakefield
Graswicz, Edward	Eng.	1941	Medford
Grela, Milton W.	Eng.	1938	Taunton
Griffin, Gerald A.	B.A.	1941	Medford
Grogan, Edmund Thomas	L.A.	1940	Quincy
Grover, John T.	Eng.	1941	Halifax
Gumina, Carmen A.	L.A.	1941	Boston
Gurkowski, Frank Richard	Eng.	1939	Worcester
Gurney, Robert	L.A.	1941	Medford
Haas, Charles V.	L.A.	1941	Roslindale
Habeshian, Ira John	L.A.	1940	Cambridge
Hagopian, Noriar Nishan	Eng.	1940	Watertown
Hainer, Herbert Milton, Jr.	L.A.	1941	Haverhill

NAME	COLLEGE	CLASS	ADDRESS
Hale, Jesse Raymond	Eng.	1941	Newton Centre
Haley, James F.	Eng.	1939	Groton
Hall, Ian L.	Eng.	1941	Dorchester
Hall, Lennard C.	B.A.	1941	Arlington
Hall, Leon Ellsworth	Eng.	1941	Newton
Halle, Mitchell J.	Eng.	1941	East Boston
Hallen, Robert O.	Eng.	1940	Everett
Halloran, John J.	L.A.	1941	Manchester
Halttunen, Elias S.	L.A.	1941	Fitchburg
Hamilton, James G.	Eng.	1941	Dedham
Hammond, Herbert C.	Eng.	1940	Newburyport
Hancock, Chester Frank	Eng.	1938	North Attleboro
Hanscom, Lewis Colby	Eng.	1941	Springfield, Maine
Hansen, Arthur E.	B.A.	1939	Bedford
Hardie, Donald C.	Eng.	1940	Brockton
Harding, Kenneth L.	B.A.	1941	Wollaston
Hardy, Albee Trainor	Eng.	1941	Belmont
Hardy, William L.	Eng.	1940	Cochituate
Harper, Arthur A.	B.A.	1941	Wakefield
Harraghy, Edward J.	L.A.	1941	Taunton
Harrington, Richard C.	Eng.	1939	Groton
Harrington, Robert Francis	L.A.	1941	Beverly
Harris, Chester L.	Eng.	1938	Hartford, Connecticut
Harrod, Stuart Leslie	Eng.	1941	Stockbridge
Hart, Jacob Cummins	L.A.	1938	Hackettstown, New Jersey
Hart, Merrill Dexter	Eng.	1939	Malden
Harte, John Edwin	Eng.	1941	Fall River
Hartford, Arthur F., Jr.	Eng.	1941	Wollaston
Hartley, James F.	Eng.	1940	Rochester
Hartwell, William J.	B.A.	1939	Medford
Harwood, Robert C.	B.A.	1941	North Bangor, New York
Haskell, Russell A.	Eng.	1940	East Haven, Connecticut
Hastings, Robert Randolph	Eng.	1941	Arlington
Hastings, Stanley R.	Eng.	1941	Marblehead
Hatch, Alder T.	L.A.	1941	Dover, New Hampshire
Hatfield, Alvin C.	Eng.	1939	Dedham
Hatton, William H.	B.A.	1940	Gardner
Haufler, Robert Christian	Eng.	1941	Jamaica Plain
Haverty, James Joseph	Eng.	1938	Brighton
Hayes, Richard	L.A.	1941	Arlington
Hayes, Paul Eugene	Eng.	1941	Pepperell
Hayner, Paul F.	Eng.	1939	Jamaica Plain
Haynes, Eugene Bancroft	Eng.	1941	Cambridge
Hazelwood, Frank Hamilton	B.A.	1940	Mattapan
Helms, Sherwin P.	L.A.	1940	Watertown
Hefron, Paul E.	B.A.	1941	Brighton
Henderson, John D.	B.A.	1941	Dorchester
Henderson, Ray	Eng.	1938	Medford
Hennessey, Edward F.	B.A.	1941	Newton
Hennigar, Howard V.	Eng.	1940	Whitman
Herbst, Harry Lawrence, Jr.	Eng.	1938	Watertown
Hersam, George R.	Eng.	1938	Lynn
Hewson, Charles R.	Eng.	1941	Wellesley Hills
Hibberd, Charles P.	Eng.	1938	West Springfield
Hickey, Edward T.	B.A.	1941	Newton Centre
Higgins, Joseph M.	Eng.	1939	Revere
Hillier, Arnold	Eng.	1941	Boston
Hills, Stanley C.	L.A.	1939	Wollaston
Hiltunen, Elias B.	L.A.	1941	Maynard

NAME	COLLEGE CLASS	ADDRESS
Hints, Oiva E.	Eng. 1939	Maynard
Histen, Harry James, Jr.	Eng. 1938	Neponset
Holcomb, Normand Perkins	Eng. 1940	Warehouse, Connecticut
Holland, Robert Thomas	Eng. 1941	Woburn
Hollis, Thomas, Jr.	Eng. 1941	Concord
Holmes, Arthur T.	Eng. 1938	Boston
Holmes, Gardner W.	L.A. 1941	Gloucester
Holmes, Robert W.	Eng. 1938	Manomet
Homer, Henry B.	B.A. 1940	Gardner
Horn, Daniel	L.A. 1938	Rochester, New York
Houghtaling, Oscar L.	Eng. 1938	Cortland, New York
Hourihan, John Timothy	Eng. 1940	Peabody
Howe, Richard Parlin	Eng. 1941	West Acton
Howlett, Joseph F.	Eng. 1941	Medford
Hoyt, Eugene Leslie	Eng. 1938	Rumford Centre, Maine
Huber, Martin Senger	B.A. 1940	Hartford, Connecticut
Hucksam, Robert W.	Eng. 1939	West Roxbury
Huff, Dean H.	B.A. 1938	Brookline
Hughes, Alfred F.	Eng. 1941	Lynn
Humphrey, Neal V.	Eng. 1938	Brewer, Maine
Humphreys, Frederick C.	Eng. 1939	Dedham
Hunt, Charles Gardner	Eng. 1939	Newton Center
Hunt, Kenneth Humphrey	L.A. 1940	Newport
Hunter, Arthur Donald	Eng. 1939	Arlington
Hunter, Clayton William	Eng. 1940	Newport, Vermont
Huntington, Paul White	B.A. 1941	Pawtucket, Rhode Island
Hurley, Raymond B.	Eng. 1941	West Newton
Hurley, Walter P.	B.A. 1938	Salem
Hussey, Elmer Ellsworth	Eng. 1941	Everett
Hutchins, Hartley F.	L.A. 1940	Marlboro
Ireland, Robert W.	Eng. 1941	Lynn
Irish, Donald B.	Eng. 1939	Portland, Maine
Irwin, Richard Jay	Eng. 1939	Pownal, Vermont
Isaacsen, Henry N.	Eng. 1939	North Raynham
Izzo, J. Alfonzo	Eng. 1941	White River Jct., Vermont
Jack, Paul W.	L.A. 1941	Dorchester
Jackson, Charles W. Jr.	Eng. 1941	Hartford, Connecticut
Jackson, Philip M.	L.A. 1941	Peterboro, New Hampshire
Jackson, Samuel W.	Eng. 1941	Medina, New York
Jacolev, Leon	Eng. 1939	Malden
James, Arnold B.	Eng. 1939	Boston
Janeczek, Walter S.	L.A. 1940	Springfield
Jeanfavre, Roger E.	Eng. 1940	Torrington, Connecticut
Jennings, Paul S., Jr.	Eng. 1941	South Braintree
Jensen, Grant S.	Eng. 1941	South Portland, Maine
Johnson, Albert D.	Eng. 1941	Norfolk Downs
Johnson, Carl B.	B.A. 1941	Belmont
Johnson, Carl H.	B.A. 1941	Pawtucket, Rhode Island
Johnson, Carl Harold	B.A. 1941	Arlington
Johnson, Erick Arthur	Eng. 1938	Jamaica Plain
Johnson, Everett A.	L.A. 1941	Worcester
Johnson, Howard E.	B.A. 1940	Maynard
Johnson, James E.	Eng. 1940	Gardner
Johnson, Ralph Floyd	Eng. 1941	Newburyport
Johnson, Raymond V.	L.A. 1940	Braintree
Johnson, Philip E.	Eng. 1941	Lynn
Johnson, Walter C.	Eng. 1938	Jamaica Plain
Johnston, Arthur W.	Eng. 1938	East Milton
Johnston, Benjamin K.	Eng. 1939	Lynn

NAME	COLLEGE CLASS	ADDRESS
Jones, August	B.A. 1938	Mongaup Valley, New York
Jones, William Henry	Eng. 1938	Melrose
Joslin, Grant W.	Eng. 1939	Arlington
Joslyn, Clyde F.	B.A. 1939	Waltham
Josselyn, Calvin E.	B.A. 1941	Wollaston
Karlsberg, Rubin	Eng. 1941	Dorchester
Katz, Israel	Eng. 1941	Boston
Katz, Maurice	Eng. 1941	Dorchester
Kaufman, Arnold	Eng. 1940	Malden
Kaufman, Morris Joseph	B.A. 1941	Boston
Keating, William H.	L.A. 1939	Roslindale
Keck, Alfred	Eng. 1940	Hyde Park
Keep, Philip R.	Eng. 1939	Rangleley, Maine
Keesan, Joseph Irving	Eng. 1940	Dorchester
Keith, Lyman Albert	B.A. 1938	Bridgewater
Kelley, Walter B.	Eng. 1941	Dorchester
Kelly, Leroy M.	Eng. 1938	Lawrence
Kelly, William J.	Eng. 1940	Marshfield Hills
Kendall, Chester M.	B.A. 1940	Gardner
Kendall, Julius	Eng. 1941	Dorchester
Kennedy, John T.	B.A. 1938	Brighton
Kennefick, Russell	L.A. 1941	Gloucester
Kenney, Frank Vincent, Jr.	Eng. 1938	Quincy
Kenney, Thomas F.	B.A. 1938	Boston
Ketcham, Arthur W.	Eng. 1941	Salisbury, Vermont
Ketchen, Charles W.	Eng. 1940	Medford
Ketchen, Ernest B.	Eng. 1941	Medford
Keyes, Fenton George	Eng. 1939	Waltham
Kiley, Robert Joseph	Eng. 1941	Dorchester
Killam, Edward Roger	B.A. 1941	Manchester
Kimball, Lawrence W.	Eng. 1938	Bedford
King, Earl W.	Eng. 1940	Malden
King, Richard A.	Eng. 1941	Fitchburg
Kingsley, Edward L.	Eng. 1940	Hatfield
Kippen, Russell F.	Eng. 1940	Gloucester
Kirkaldy, Robert Burns	Eng. 1940	Dorchester
Kleeman, Harold C.	B.A. 1939	Winthrop
Kleemola, Wilho K.	Eng. 1938	Beverly
Knight, Winfield B.	Eng. 1941	Taunton
Knowlton, Francis H.	Eng. 1938	Natick
Knox, Norman W.	Eng. 1938	Somerville
Kodis, Ralph D.	Eng. 1940	Portland, Maine
Kohl, Wesley A.	L.A. 1940	West Roxbury
Kolstad, C. Kenneth	Eng. 1938	Rochester, New York
Komskis, Joseph F.	Eng. 1941	Southold, New York
Korejwa, Alfred	Eng. 1940	Boston
Kotapka, Stanley	Eng. 1940	Kenmore, New York
Krosschell, Herman	Eng. 1941	Newton Centre
Kruchas, Fred Alphonse	B.A. 1938	Norwood
Krystyan, Karol J.	Eng. 1939	East Boston
Kudravetz, Michael	Eng. 1939	Norwich, Connecticut
Kulaszewski, Frank	Eng. 1941	Salem
Kushner, David	Eng. 1940	Dorchester
Labowicz, Vincent P.	B.A. 1941	Maynard
Lafferty, Robert H.	Eng. 1941	Bradley Beach, New Jersey
Lahger, Frederick G.	B.A. 1941	Brookline
Laine, Reino	Eng. 1938	East Weymouth
Lake, Roger J.	Eng. 1938	Milton
Lamb, William X., Jr.	Eng. 1941	Taunton

NAME	COLLEGE CLASS	ADDRESS
Lambert, Alfred Ernest	Eng. 1939	West Roxbury
Lambert, Charles Edgar	Eng. 1939	West Hartford, Connecticut
Landall, Alden P.	Eng. 1939	Lynn
Landsman, Abraham E.	Eng. 1941	Boston
Landwehr, Edward Carl	Eng. 1939	New Britain, Connecticut
Lang, Carleton	Eng. 1938	Brockton
Lang, Frank N.	L.A. 1941	Swampscott
Lanzilli, Carl	Eng. 1940	East Boston
Larsen, Fred Roger	Eng. 1941	Somerville
Lavache, Francis W.	Eng. 1939	Plymouth
Lawrence, Lloyd S.	Eng. 1941	La Fargeville, New York
Leck, George C.	Eng. 1938	Saugus
Ledwith, Walter Andrew	Eng. 1939	New Haven, Connecticut
Lee, Frederick W.	B.A. 1940	Charlestown
Leighton, Burritt F.	Eng. 1939	Brockton
Lennon, Leo	L.A. 1941	Lincoln
Lente, Allen R.	B.A. 1939	Brownville Jct., Maine
Leonard, Fred P.	Eng. 1941	Taunton
Leonard, John G.	Eng. 1939	Lynn
Leonard, Milton H.	Eng. 1941	Barker, New York
Lepinsky, Nathan	L.A. 1940	Dorchester
Levenson, Paul Milton	Eng. 1940	Roxbury
Levin, Benjamin	L.A. 1940	Chelsea
Levine, Saul	B.A. 1941	Lowell
Levinsky, Rubin	L.A. 1941	Dorchester
Levinson, Nathan M.	Eng. 1941	Pittsfield
Levy, Joshua P.	Eng. 1941	Dorchester
Lewis, Gardner H.	Eng. 1941	Hampton, Connecticut
Lewis, Philip R.	B.A. 1941	Dorchester
Lewis, Robert H.	Eng. 1938	Belmont
Linchitz, Leonard	L.A. 1940	Dorchester
Lind, Gustav Adolf	Eng. 1941	Brookline
Lindbloom, John A.	Eng. 1938	Beverly
Lindfors, Gustav M.	Eng. 1940	Milton
Lindner, John D.	B.A. 1940	Canandaigua, New York
Lipman, Robert Newman	Eng. 1941	Lynn
Little, Frederic A.	Eng. 1940	Wollaston
Little, William H.	L.A. 1940	Boston
Littlefield, William A.	B.A. 1941	Waltham
Livshitz, Seymour	L.A. 1941	Montreal, Quebec
Lockerby, David A.	L.A. 1941	Framingham
Logan, John Thomas	B.A. 1941	Waltham
Loiselle, Charles Henry	B.A. 1941	Springfield
Lord, Donald H.	B.A. 1941	Dover, New Hampshire
Lovgren, Carl Albert	Eng. 1941	Rockport
Lovequist, Edwin Harry, Jr.	B.A. 1941	Waltham
Lowd, Ernest Norman	Eng. 1938	Amesbury
Lowe, Charles A.	B.A. 1941	Medford
Luck, Harold	Eng. 1938	Dorchester
Lund, John S.	B.A. 1940	Watertown
Lundquist, Richard A.	Eng. 1941	Arlington
Lundwall, Paul W.	Eng. 1939	Lowell
Lusis, Frank A.	Eng. 1938	Dorchester
Lynch, Thomas J.	Eng. Sp.	Jamaica Plain
Lynch, Daniel M.	Eng. 1938	Brookline
MacCaffray, Stuart Allan	Eng. 1941	Hull
MacCallum, George A.	Eng. 1940	Taunton
Maccini, Julius J.	L.A. 1940	Everett
Macdonald, Paul Joseph	Eng. 1941	Somerville

NAME	COLLEGE	CLASS	ADDRESS
MacDonough, William R.	L.A.	1941	Jamaica Plain
Macewen, Herbert F.	Eng.	1941	Natick
MacFarlane, George M.	L.A.	1940	Boston
MacFawn, Warren	Eng.	1938	Boston
MacIntyre, Victor S.	Eng.	1940	Milton
MacKenzie, Alfred K.	Eng.	1939	Boston
MacKenzie, William Edward	Eng.	1938	Melrose
MacKerrow, Horace G., Jr.	L.A.	1940	Allston
MacLeod, Allan M.	Eng.	1940	Boston
MacLeod, James Allan	Eng.	1941	Braintree
Macmann, Edward	Eng.	1941	Reading
MacMath, Warren Elliott	Eng.	1941	Auburndale
MacMullan, Leslie Henry	B.A.	1941	Framingham
MacRae, Austin David, Jr.	Eng.	1939	Concord
Macy, Robert Hoxsie	Eng.	1940	New Bedford
Madden, Richard M.	Eng.	1941	Rangeley, Maine
Mahaffy, Reid A.	Eng.	1938	Argyle, New York
Mahoney, George L.	Eng.	1941	Taunton
Makas, Albert S.	L.A.	1940	South Boston
Malfa, Horace F.	L.A.	1939	Brighton
Maling, Henry F.	Eng.	1939	Arlington
Malm, Norman Arthur	Eng.	1941	West Roxbury
Maloney, Hugh Thomas	Eng.	1938	Watertown
Mann, Alvin H.	Eng.	1939	Dorchester
Mann, Irving N.	L.A.	1941	North Marshfield
Manning, John H.	Eng.	1939	Newton
Manoogian, Henry	Eng.	1940	Salem
Manuel, E. George	Eng.	1939	Long Branch, New Jersey
Margolin, Reubin J.	L.A.	1941	Roxbury
Marino, Felix	Eng.	1941	Swampscott
Markham, Leslie	Eng.	1941	Essex, Connecticut
Marsh, Charles F.	Eng.	1941	Lynn
Marshall, Alfred James	L.A.	1940	Dorchester
Marshall, Alfred Lucas	Eng.	1939	Melrose
Marshall, Robert Henry	Eng.	1941	Needham
Marston, Robert S.	Eng.	1941	Dedham
Martensen, Arthur O.	B.A.	1939	Everett
Martin, Roland J.	Eng.	1940	East Hiram, Maine
Mascianica, Francis Stanley	Eng.	1941	Everett
Mason, Clifford O.	B.A.	1941	Winchester
Materese, Vincent	Eng.	1941	Melrose
Matheson, Frederick	B.A.	1939	Somerville
Matheson, Stuart B.	Eng.	1941	Belmont
Mattoli, Arthur	Eng.	1940	Arlington
Maybury, Richard D.	Eng.	1939	Saco, Maine
Maynard, Arthur F.	Eng.	1940	Lake Placid, New York
McAllister, Robert W.	Eng.	1941	Tarentum, Pennsylvania
McAuley, Thomas M.	B.A.	1941	West Concord
McAuslan, Albert H., Jr.	Eng.	1941	Auburndale
McBride, Douglas F.	Eng.	1941	East Milton
McCarthy, Alan O.	B.A.	1941	Waltham
McCarthy, William T.	B.A.	1940	Brighton
McCarty, Charles D.	Eng.	1941	New Bedford
McCarty, Lawrence Henry	L.A.	1941	Worcester
McDonald, John Leo	Eng.	1941	Cambridge
McDonald, Ralph Charles	Eng.	1939	East Boston
McDonald, Roger G.	Eng.	1940	Portland, Maine
McDonough, Thomas C.	Eng.	1940	Arlington
McEwan, Alexander	Eng.	1940	East Braintree

NAME	COLLEGE	CLASS	ADDRESS
McGarry, Robert W.	Eng.	1941	Maynard
McGrath, William A.	Eng.	1939	Adams
McGurl, Eugene F.	Eng.	1940	Arlington
McInnis, Vincent John	Eng.	1941	Waltham
McKay, John A.	L.A.	1941	North Billerica
McKenzie, Allan M.	Eng.	1941	Dorchester
McKenzie, Bertram E.	Eng.	1939	Dorchester
McKenzie, Ernest W.	L.A.	1940	Methuen
McLane, Hugh W.	Eng.	1941	Waltham
McLatchy, Allen Hill, Jr.	Eng.	1939	Woburn
McMahon, Thomas E.	Eng.	1939	Dorchester
McManus, Richard Owen	Eng.	1941	Dorchester
McPherson, William	B.A.	1941	Hingham
McQuarrie, Wallace E.	B.A.	1940	Brownville Jct., Maine
McQueen, William A.	Eng.	1941	Boston
McRae, Albert H.	Eng.	1938	Taunton
McTernan, James F.	B.A.	1941	Roslindale
Means, F. Clark	Eng.	1938	Newton Centre
Meehan, Frank H.	L.A.	1939	Belmont
Meehan, Francis Joseph	Eng.	1941	Newton
Meggison, Ernest J.	B.A.	1938	Lynn
Meissner, Edward G.	B.A.	1939	Waban
Melkonian, Hurire	Eng.	1941	Penacook, New Hampshire
Mello, William T.	B.A.	1939	Cambridge
Meltzer, Jack	Eng.	1939	Portland, Maine
Melville, Norman L.	Eng.	1941	Quincy
Merchant, Leonard G.	L.A.	1941	Randolph
Merrill, Raymond Earle, Jr.	Eng.	1941	Arlington
Meshna, John, Jr.	Eng.	1941	Malden
Metherall, John F.	Eng.	1939	Wollaston
Michaelson, Eliot D.	B.A.	1941	Dorchester
Miles, Daniel W.	Eng.	1940	Norwood
Milewski, Chester A.	Eng.	1938	East Hartford, Connecticut
Milham, Russell	L.A.	1941	Boston
Millen, Curtis W.	B.A.	1941	Wollaston
Miller, Harry	Eng.	1939	Dorchester
Miller, Harvey S.	Eng.	1941	Brookline
Miller, Richard Clayton	Eng.	1941	Lynn
Miller, William S.	B.A.	1938	Hackettstown, New Jersey
Millet, Charles E.	B.A.	1938	Pittsfield
Milman, Philip Malcolm	B.A.	1941	Newton
Milner, Howard L.	B.A.	1941	Newton Centre
Minihan, John Roy	L.A.	1941	North Wilmington
Molineux, Carlton E.	L.A.	1939	Lynn
Mollica, Robert D.	B.A.	1940	Belmont
Molloy, Thomas A.	L.A.	1939	Newton
Monson, Roy E.	Eng.	1941	West Hartford, Connecticut
Monteith, Howe C.	Eng.	1941	North Quincy
Moody, Daniel	B.A.	1941	Melrose
Moody, George Fallows, Jr.	Eng.	1939	Swampscott
Moore, John C.	L.A.	1941	West Falmouth
Moran, Irwin William	Eng.	1940	Brockton
Moraski, Edward	Eng.	1941	Roslindale
Morgan, Edward W.	Eng.	1941	Gardner
Morgan, Harold Doubleday	B.A.	1941	Lexington
Mormile, Anthony	Eng.	1941	Glasco, New York
Morrell, Edwin T.	Eng.	1938	North Attleboro
Morris, Harold B.	L.A.	1940	Revere
Morris, Howell G.	B.A.	1941	Dedham

NAME	COLLEGE	CLASS	ADDRESS
Morris, James A.	B.A.	1941	Lawrence
Morse, Reginald	Eng.	1941	Auburndale
Morton, Edward K.	Eng.	1940	Lowell
Morton, Eldon J.	Eng.	1940	Quincy
Mulak, Stephen	Eng.	1939	Hazardville, Connecticut
Mullen, Anthony J.	B.A.	1938	South Boston
Murphy, Edward Joseph	Eng.	1938	Waterbury, Connecticut
Murphy, James Francis	Eng.	1939	Dorchester
Murray, Glenn J.	Eng.	1940	Gardner
Murray, Thomas Michael	Eng.	1940	Taunton
Mustofa, Muhammed	L.A.	1938	Assam, India
Nee, Joseph Myles	Eng.	1940	Dorchester
Nelson, Carl J.	Eng.	1941	Gloucester
Nelson, Robert C.	Eng.	1941	Needham
Newberg, Harland W.	Eng.	1941	Brockton
Newcomb, Royce R.	Eng.	1941	Angola, New York
Newton, Richard A.	B.A.	1941	Sharon
Newton, Robert G.	Eng.	1939	Sharon
Nicolosi, Sebastian J.	Eng.	1940	Lawrence
Niconchuk, Alec W.	Eng.	1941	Peabody
Niederhauser, Harry R.	B.A.	1940	Roslindale
Nilsen, Lornts Bernard, Jr.	Eng.	1940	New Bedford
Nordstrom, Joseph A.	Eng.	1941	Bridgeport, Connecticut
Nowosielski, Alfred	Eng.	1939	East Boston
Noyes, Harry F.	Eng.	1938	Brookline
Nugent, William A.	Eng.	1941	Roslindale
Nychay, Joseph	Eng.	1939	Mattapan
Nye, James Henry	Eng.	1940	Brockton
Oakes, Arnold	Eng.	1938	Taunton
O'Connell, Philip	Eng.	1940	North Easton
O'Connor, Arthur M., Jr.	Eng.	1941	Revere
Oestreicher, Gerald S.	B.A.	1941	Pittsburgh, Pennsylvania
Ogle, William J.	Eng.	1941	Malden
O'Leary, Humphrey Edward	L.A.	1941	Cambridge
Oliva, Frederick	B.A.	1938	Winchendon
O'Neal, Walter Myron	B.A.	1938	East Milton
O'Neil, Frank Bernard	B.A.	1941	Lynn
O'Neil, Stephen J.	Eng.	1941	Dorchester
O'Neill, Harry Thomas, Jr.	Eng.	1939	Taunton
Otto, Paul Newton	B.A.	1938	Watertown
Ostrowsky, Samuel	Eng.	1941	Everett
Packard, Shirley W.	Eng.	1938	Brookline
Palmer, Herbert I.	Eng.	1941	Everett
Palmgren, Richard P.	L.A.	1941	Wollaston
Palombo, Vincent A.	L.A.	1940	Roslindale
Pappas, Marcos John	Eng.	1939	Dedham
Park, Robert Lothrop	Eng.	1939	South Weymouth
Parker, Lester M.	Eng.	1941	Pine Bush, New York
Parkhurst, Edward N.	Eng.	1941	Revere
Parrinello, Joseph Peter	Eng.	1941	Wellesley
Parsons, Roy L., Jr.	Eng.	1941	Gloucester
Pasquarosa, Frank	Eng.	1940	Boston
Pass, Maurice A.	B.A.	1940	Dorchester
Patch, Alfred E.	Eng.	1938	Windsor, Vermont
Pater, Alexander J.	B.A.	1938	Lowell
Patev, Nikola C. G.	Eng.	1941	Brockton
Paul, Charles C.	Eng.	1941	South Braintree
Peale, Richard N.	L.A.	1941	South Hamilton
Pearson, David A.	Eng.	1941	Medina

NAME	COLLEGE	CLASS	ADDRESS
Pearson, Donald B.	Eng.	1940	New Sweden, Maine
Pearson, Thomas J.	Eng.	1940	Lawrence
Peeke, Ernest C.	Eng.	1939	Newburyport
Pelley, James A.	Eng.	1941	Lynn
Peloubet, Elmore M.	Eng.	1940	Athens, New York
Peoples, Robert R.	Eng.	1939	Natick
Peppard, William Sherman	B.A.	1941	Arlington
Perham, J. Newton	Eng.	1938	Islington
Perkins, William J.	Eng.	1940	Danvers
Perry, Donald A.	Eng.	1941	Boston
Perry, Elmer J.	Eng.	1939	Melrose
Persia, Philip	Eng.	1939	Holley, New York
Petraske, William C.	Eng.	1939	Johnstown, New York
Petrou, Nickos V.	Eng.	1940	Springfield
Pfeiffer, Robert L.	Eng.	1938	Bedford
Phillips, Richard J.	Eng.	1938	Boston
Phillips, George Loring	Eng.	1941	Dedham
Pickering, George D.	Eng.	1939	Dorchester
Piekarski, Joseph B.	Eng.	1939	Roslindale
Pierson, Robert P.	Eng.	1941	Brighton
Piotrowski, Henry J.	Eng.	1940	South Boston
Pittendreigh, William Wallace	Eng.	1939	New Bedford
Plasewicz, Casimir	Eng.	1938	Lynn
Pollard, Lewis William	Eng.	1938	Dorchester
Polley, Robert Webster	Eng.	1939	Natick
Polner, Morris	L.A.	1941	Mattapan
Polonsky, Abraham	Eng.	1941	New Bedford
Pomerantz, Bernard	L.A.	1941	Hartford, Connecticut
Pomeroy, William D.	Eng.	1941	Andover
Porembski, Thaddeus T.	Eng.	1939	City Mills
Pottle, Herbert William	Eng.	1940	Newburyport
Powell, James T.	L.A.	1939	Medford Hillside
Pratt, Harold L.	Eng.	1940	Newtonville
Pritchard, Herbert C.	Eng.	1941	Wollaston
Pritchard, Orland T.	Eng.	1938	Portland, Maine
Pritchard, Robert T.	B.A.	1940	Boston
Probst, Arthur Edward	B.A.	1941	West Roxbury
Provencher, Robert Dana	Eng.	1939	Somerville
Psilekas, Vassil L.	Eng.	1939	Brockton
Putzel, Daniel J., Jr.	Eng.	1938	Hamden, Connecticut
Quann, Edward David, Jr.	L.A.	1941	Norwood
Race, Harry Carlton	Eng.	1941	Norwood
Rand, Arthur I.	Eng.	1941	Danvers
Rand, Hazen B.	Eng.	1941	Avon
Randall, Floyd A.	Eng.	1939	North Berwick, Maine
Ray, Arthur Francis	Eng.	1941	Watertown
Raymond, Roger C.	Eng.	1938	Salem
Reed, Warren Leslie	Eng.	1941	Stoneham
Rees, Kenneth A.	Eng.	1938	Dorchester
Regan, Harold Thomas	B.A.	1938	Cambridge
Reininger, Louis G.	Eng.	1940	Saugus
Reynolds, Adelbert R.	Eng.	1940	Portland, Maine
Reynolds, Milton Hathaway	B.A.	1940	Lynn
Ricci, Louis A.	Eng.	1938	Roslindale
Rice, Merton	L.A.	1938	Chelesa
Rich, William N.	Eng.	1941	West Newton
Richardson, William F.	Eng.	1940	Malden
Richmond, John F.	L.A.	1941	Milton
Rick, Charles A.	Eng.	1941	Wellesley

NAME	COLLEGE	CLASS	ADDRESS
Ricker, Millard O.	Eng.	1939	Harrisburg, Pennsylvania
Riford, Charles P.	Eng.	1939	East Bethel, Vermont
Rigney, Edward Thomas	Eng.	1941	Boston
Rimer, Manuel	Eng.	1940	Mattapan
Rippere, George H.	B.A.	1941	Waterbury, Connecticut
Robertson, Orville G.	Eng.	1938	Lewiston, Maine
Robinson, Alden Niles	Eng.	1941	Arlington Heights
Robinson, Benjamin Gale	Eng.	1940	Longmeadow
Rockett, Robert E.	Eng.	1939	Valley Stream, New York
Rockwood, Ainsley	Eng.	1938	West Springfield
Rogers, John B.	Eng.	1940	Methuen
Rogers, Murray H.	Eng.	1941	Methuen
Rogers, Robert F.	Eng.	1938	Concord, New Hampshire
Rogers, Russell J.	Eng.	1941	West Pawlet, Vermont
Rogers, Stanley L.	L.A.	1940	Great Meadows, New York
Rogers, Theodore James	Eng.	1939	Melrose
Rogers, William Harrison, Jr.	Eng.	1940	Malden
Rollins, Ralph W., Jr.	B.A.	1938	Augusta, Maine
Rook, Gustav	Eng.	1939	Dorchester
Rosberry, Frederick	Eng.	1941	Millers Falls
Rosecaln, Henry	Eng.	1938	Boston
Rosenberg, Irving S.	Eng.	1940	Chelsea
Rosenkrans, Frank Allen	Eng.	1940	Needham Heights
Rosenthal, Seymour M.	Eng.	1941	Dorchester
Rosnov, Maxwell	Eng.	1939	Mattapan
Ross, Morwick	Eng.	1939	Jamaica Plain
Roundy, Wayne A.	Eng.	1941	Gardner
Rowe, Frederick D.	Eng.	1939	Orange
Roy, Arthur	Eng.	1941	Fall River
Rubin, Harry	Eng.	1941	Roxbury
Ruggiero, Francis J.	Eng.	1941	Boston
Rumery, E. Stuart, Jr.	B.A.	1941	Medford
Ryan, Francis W.	B.A.	1939	Bennington, Vermont
Ryan, Frank E.	Eng.	1940	Brighton
Ryan, Robert C.	Eng.	1941	Haverhill
Ryback, Eugene Andrew	Eng.	1941	Lynn
Ryder, Raymond B.	Eng.	1941	Saugus
Rymsha, Michael J.	Eng.	1941	Cambridge
Sackett, Herbert Stanley	Eng.	1939	Springfield
Sadowski, Julius Joseph	B.A.	1941	Dorchester
Saffer, Milton L.	Eng.	1941	Quincy
Saija, Michael A.	L.A.	1938	Boston
Sakamoto, Makoto	Eng.	1940	Dedham
Samuelian, Andrew Y.	Eng.	1940	Boston
Samuelson, Ralph Henry	Eng.	1941	Arlington
Sandarg, Stanley	B.A.	1941	Pittson, Pennsylvania
Sandelin, Marshall P.	Eng.	1941	Hamden, Connecticut
Sanford, Edward Arnold, Jr.	B.A.	1938	Buzzards Bay
Sanford, Harold E.	Eng.	1938	Fall River
Sanseverino, Frank J.	Eng.	1939	Boston
Sarnow, Frank W.	Eng.	1939	Melrose
Saunders, Earl Raymond	Eng.	1938	Boston
Saunders, Paul W.	Eng.	1938	Watertown
Savage, Kenneth M.	Eng.	1941	Dorchester
Savage, Philip N.	L.A.	1941	Boston
Savage, Richard C.	Eng.	1938	Boston
Sawyer, Chester R.	Eng.	1938	Atlantic
Sayward, S. Stowe	Eng.	1940	Melrose
Schaller, Ferdinand	Eng.	1938	South Natick

NAME	COLLEGE	CLASS	ADDRESS
Schmieder, Albert K.	Eng.	1941	Canton
Schroder, Charles Harold	Eng.	1940	West Hartford, Connecticut
Schueler, Martin J.	Eng.	1939	Stamford, Connecticut
Schwelm, Frederick C.	Eng.	1939	Somerville
Scott, George C.	Eng.	1939	Granby
Sears, Aubrey C.	Eng.	1941	Gloucester
Seaver, Lyle G.	B.A.	1941	Ripon, Wisconsin
Seed, Douglas A.	B.A.	1939	Salem Depot, New Hampshire
Seeley, Henry G.	Eng.	1940	South Boston
Seely, Allan Walton	Eng.	1941	Danvers
Segal, Edward	L.A.	1940	Dorchester
Selig, James Lowell	L.A.	1940	Gloucester
Sellers, Donald R.	B.A.	1941	Watertown
Sellon, Woodrow Lee	Eng.	1940	Melrose
Sessler, Howard A.	L.A.	1940	Arlington
Sevougian, Stephen G.	Eng.	1940	Bridgewater
Sewell, Edgar Fuller	Eng.	1941	Quincy
Shailer, Malcolm H.	Eng.	1940	Deep River, Connecticut
Shaman, Morris Nathan	Eng.	1939	Roxbury
Shanker, George Arthur	L.A.	1941	Mattapan
Shannon, Harold P.	Eng.	1938	Woburn
Shapiro, Saul	Eng.	1940	Mattapan
Shapleigh, Philip B.	Eng.	1941	Malden
Sharp, Daniel DeWitt	Eng.	1939	Stoneham
Sharp, John R.	Eng.	1941	Manchester, Connecticut
Shaw, Stanley	B.A.	1939	West Roxbury
Shaw, William M.	Eng.	1940	Wollaston
Shea, R. Brendan	B.A.	1941	South Groveland
Sheehan, Eugene William	Eng.	1939	Rockland
Shepherd, Edward F.	B.A.	1941	Hopedale
Sherman, Frederick L.	Eng.	1939	Marlboro
Shields, William J.	L.A.	1940	Arlington
Shiers, Forrest J.	B.A.	1938	Jamaica Plain
Shopnik, Morton	Eng.	1940	Dorchester
Shortell, Edward	Eng.	1941	Greenfield
Sibley, Richard A.	B.A.	1941	Fitchburg
Sibley, Richard Potter	Eng.	1941	Melrose
Shulman, Irving	Eng.	1941	Dorchester
Siegel, Ellis	L.A.	1941	Medford
Sigismund, Mark	Eng.	1941	Brighton
Silby, Henry F., Jr.	Eng.	1940	Needham
Sinofsky, Louis H.	Eng.	1940	Roxbury
Sinski, Henry A.	Eng.	1941	Gardner
Sinton, John J.	Eng.	1940	Bedford
Sivertson, John N.	L.A.	1938	Medford
Skiff, Lorin C.	B.A.	1940	Walton, New York
Slack, George Curtis	B.A.	1940	Needham
Slack, Robert C.	Eng.	1940	Needham
Slade, Robert Chester	B.A.	1940	Belmont
Slater, John Morrison	L.A.	1940	Lexington
Small, Harold M.	Eng.	1939	Springfield
Small, Philip A.	B.A.	1938	Reading
Smith, Andrew L.	Eng.	1938	Marblehead
Smith, Arthur, Jr.	Eng.	1941	Lexington
Smith, Clifford A.	B.A.	1939	Dedham
Smith, Everett C.	B.A.	1941	Melrose
Smith, Frazer Talmadge	L.A.	1941	Dorchester
Smith, John Lloyd, Jr.	Eng.	1940	Islington
Smith, Lewis B.	Eng.	1941	Berwick, Pennsylvania

NAME	COLLEGE	CLASS	ADDRESS
Smith, Lothrop	Eng.	1940	Wollaston
Smith, Philip G.	Eng.	1939	Beverly
Smith, Robert Loran	Eng.	1938	Revere
Smith, Shaw B.	B.A.	1941	Waltham
Smith, William L.	Eng.	1941	Raynham
Snell, George A.	Eng.	1941	Nantucket
Snow, Arnold E.	Eng.	1941	Greenfield
Snyder, George J.	Eng.	1941	Roxbury
Snyder, Hyman G.	Eng.	1938	Mattapan
Solovey, John, Jr.	Eng.	1940	Harrison, New York
Sones, Max	Eng.	1938	Boston
Spears, Richard F.	B.A.	1938	Brookline
Spidell, Emery P.	Eng.	1940	Dorchester
Stacey, John Harris	Eng.	1941	Saugus
Stanton, Francis A.	Eng.	1940	Dorchester
Stasinopoulos, Peter John	Eng.	1938	Roxbury
Stawicki, Sigmund W.	Eng.	1940	Chelsea
Steeves, Clifford R.	B.A.	1940	Needham Heights
Stedt, Roland A.	B.A.	1941	Holden
Stein, Julius	Eng.	1938	Chelsea
Stepasiuk, John	B.A.	1941	Malden
Sterr, William Robert	Eng.	1939	Swampscott
Stetson, Horace	Eng.	1941	Melrose
Stevens, Clarence Wesley	Eng.	1939	North Quincy
Stewart, J. Rodgers, Jr.	Eng.	1941	Belmont
Stickland, Walter Warren	Eng.	1939	Reading
Stillman, Harry	B.A.	1940	Salem
Stockbridge, Willis C.	Eng.	1939	Maynard
Stoddard, Stuart V.	Eng.	1941	Rockland
Stone, Ashton K.	Eng.	1938	Norwood
Stone, Clarence Etsler	Eng.	1941	Brockton
Stone, Clyde Callahan	Eng.	1941	Brockton
Stone, Maxwell Dabney	L.A.	1941	Waltham
Straw, Leonard H.	Eng.	1938	Melrose
Strom, Alnes B.	Eng.	1938	Concord, New Hampshire
Strong, Albert G.	B.A.	1940	Northampton
Struzziero, Alexander J.	B.A.	1941	East Boston
Stupak, Frank Richard	Eng.	1939	Norwood
Sturtevant, Paul F.	Eng.	1939	Halifax
Sullivan, Cornelius M.	L.A.	1941	Cambridge
Sullivan, Eugene Frederick	Eng.	1938	Arlington
Sullivan, Francis A.	Eng.	1941	Lexington
Sullivan, Frederick	L.A.	1941	Burlington
Sundborg, Thomas, Jr.	Eng.	1940	Newton
Surgecoff, Oscar	Eng.	1938	Everett
Svelnis, Frank Stephen	Eng.	1941	South Boston
Swain, Walter	Eng.	1940	Haverhill
Swardlick, Samuel	B.A.	1941	Canton
Swanson, Leslie	Eng.	1939	Quincy
Sylvester, Edwin E.	Eng.	1938	Brookline
Szablewicz, John Henry	Eng.	1941	Hyde Park
Tagliaferro, Louis R.	Eng.	1939	Pittsfield
Tanen, Robert S.	B.A.	1941	Lynn
Tartari, Joseph T.	Eng.	1939	Wellesley
Tatel, William	B.A.	1938	Roxbury
Tavelli, Clinton E.	L.A.	1940	Williamstown
Tavilla, Paul	B.A.	1940	Everett
Taylor, Erwin Norris	Eng.	1941	Waltham

NAME	COLLEGE	CLASS	ADDRESS
Taylor, George E.	Eng.	1938	Pottersville
Taylor, Robert Archer	Eng.	1940	Newburyport
Taylor, William E.	B.A.	1938	Melrose
Tebbetts, Stanley R.	B.A.	1940	Lexington
Telowetski, John	B.A.	1941	Delanson, New York
Thayer, Floyd L.	Eng.	1939	Hingham
Thomas, Reginald C.	L.A.	1941	Newtonville
Thomas, Walter Moreland	Eng.	1939	Melrose Highlands
Thompson, Almore Irving	B.A.	1938	Wellesley Farms
Thompson, Gordon Arthur	Eng.	1939	Dedham
Thompson, Loring M.	Eng.	1940	West Newton
Thompson, Warren Henry	Eng.	1941	Frammingham
Thorp, Wilfred, Jr.	L.A.	1941	Waltham
Thorpe, Paul P.	Eng.	1941	Frammingham
Thorsen, Severin Martin	Eng.	1941	Cambridge
Thwing, Roger W.	Eng.	1939	Winchester
Tibbetts, Orren A.	Eng.	1941	Rangeley, Maine
Titus, Jay Sterling Morton	B.A.	1941	Brookline
Tobin, Abraham	Eng.	1941	Chelsea
Todd, Forrest Randolph	Eng.	1939	Newburyport
Topalian, Benon S.	Eng.	1941	Brighton
Torrance, Kenneth R.	Eng.	1939	Lake Placid, New York
Toscano, George J.	B.A.	1939	Lawrence
Toubman, William S.	L.A.	1941	Hartford, Connecticut
Toucey, Robert Edward	Eng.	1941	Stratford, Connecticut
Townsend, Ralph V.	Eng.	1941	Roxbury
Trachtenberg, Sidney	L.A.	1939	East Haven, Connecticut
Tracy, Charles A., Jr.	L.A.	1940	Lexington
Tracy, Linwood W.	B.A.	1939	Boston
Traverse, George V.	B.A.	1938	Arlington
Trefethen, James B., Jr.	L.A.	1940	Wareham
Troup, Richard Wallace	Eng.	1939	Quincy
Tse, Albie N.	L.A.	1941	Boston
Turton, Hallam Walter, Jr.	B.A.	1941	Athol
Tweedy, Donald Talbot	Eng.	1941	Taunton
Tyler, Edward L., Jr.	B.A.	1941	Lexington
Uhland, Laurence S.	B.A.	1941	Bridgeton, New Jersey
Ulass, Charles K.	Eng.	1938	Jamaica Plain
Vandersloot, Peter R.	Eng.	1938	West Newton
VanLoan, Casper J.	Eng.	1941	Athens, New York
Van Tuyl, Donald W.	Eng.	1940	Greenport, New York
Vartanian, George	B.A.	1940	Cambridge
Vareika, Woodrow J.	Eng.	1941	Brockton
Vedoe, Russell A.	B.A.	1938	Wollaston
Vermilyea, Rex	Eng.	1940	Wellesley Hills
Vespaziani, Albert	Eng.	1941	East Milton
Vincent, Manuel	Eng.	1941	Fall River
Vovos, George	L.A.	1939	Newburyport
Vreeland, Kenneth G.	Eng.	1941	Bayonne, New Jersey
Wade, Kenneth S.	Eng.	1938	West Dennis
Wagner, Robert J.	Eng.	1941	Roslindale
Waide, Walter E., Jr.	Eng.	1941	Greenfield
Walker, Lincoln R.	B.A.	1938	East Lynn
Walker, Raymon G.	Eng.	1941	East Braintree
Wallace, William	Eng.	1941	Everett
Wallace, William L.	L.A.	1941	Nova Scotia
Wallace, William O.	Eng.	1941	Newton
Wallis, Linzee	Eng.	1940	Mansfield
Walton, Elmer W., Jr.	Eng.	1941	Newburyport

NAME	COLLEGE	CLASS	ADDRESS
Warren, Richard D.	B.A.	1940	Lawrence
Warwick, Edward John	Eng.	1941	Boston
Watt, William H.	Eng.	1941	Lynn
Weafer, Robert J.	B.A.	1940	Dorchester
Weatherby, John H.	L.A.	1941	Natick
Webb, Henry Albert J.	Eng.	1938	Beverly
Webber, Joseph W.	L.A.	1939	Boston
Weightman, Herbert G.	Eng.	1941	White Plains, New York
Weintraub, William	L.A.	1940	Newburyport
Wennberg, Norman A.	B.A.	1941	Quincy
Westdahl, Richard E.	B.A.	1939	White Plains, New York
Wheeler, Dwight E.	Eng.	1939	Bristol, Connecticut
Whipple, Richard S.	Eng.	1940	Newtonville
White, Bradford C.	Eng.	1938	West Springfield
White, John Piazzoli	Eng.	1941	Dorchester
White, Joseph Emery	B.A.	1941	Newtonville
White, Robert C.	B.A.	1940	Fitzwilliam, New Hampshire
Whites, Andrew William	Eng.	1941	Marlboro
Whittier, Roderick P.	B.A.	1938	Woodsville, New Hampshire
Wiggin, Donald A.	Eng.	1941	Manchester, New Hampshire
Wilbur, Allen	Eng.	1939	Hingham
Wilbur, Robert Lawrence	Eng.	1940	Marlboro
Wilcox, Alfred R.	B.A.	1941	Oneco, Connecticut
Wiley, Harold Irving	Eng.	1939	Roxbury
Wilkins, Roger Felch	Eng.	1941	North Attleboro
Williams, Edward P.	B.A.	1939	Dorchester
Williams, John G.	L.A.	1940	Bennington, Vermont
Williams, Kenneth Washburn	B.A.	1941	South Hingham
Williams, Russell L.	Eng.	1940	Wollaston
Willis, John Kennedy	Eng.	1940	West Haven, Connecticut
Wills, Richard J.	Eng.	1940	Medfield
Wills, Wilfred H.	Eng.	1940	Medfield
Wilson, Allan	Eng.	1940	Roxbury
Wilson, Allan C.	B.A.	1939	Boston
Wilson, John W.	Eng.	1939	Quincy
Wilson, William Smith	B.A.	1941	Wellesley
Winkley, Kenneth L.	Eng.	1939	Lynn
Wise, Louis William	Eng.	1939	North Attleboro
Wisgirda, Francis	Eng.	1940	Norwood
Witkus, Frank A.	Eng.	1939	Dorchester
Wolf, Saul	Eng.	1941	Dorchester
Wolff, Herbert K.	B.A.	1939	Allston
Wollow, Joseph A.	Eng.	1939	Danielson, Connecticut
Wolozin, Matthew	Eng.	1941	Malden
Wolti, Arne J.	Eng.	1939	Lebanon, New Hampshire
Wood, Leonard F.	L.A.	1941	Middleboro
Wooding, Edwin R.	Eng.	1939	North Haven, Connecticut
Woodward, Everett M.	Eng.	1940	Winterport, Maine
Woodward, Robert B.	Eng.	1941	Greenfield
Woollacott, Robert A.	Eng.	1941	Melrose
Workman, Harold, Jr.	L.A.	1941	East Weymouth
Worobel, John	Eng.	1939	Hartford, Connecticut
Wray, Albert W.	Eng.	1941	Attleboro
Wright, Gordon E.	L.A.	1938	Arlington
Wright, John R.	Eng.	1938	Quincy
Wright, Justin P.	Eng.	1939	Springfield, Vermont
Wright, Richard E.	Eng.	1941	Wollaston
Yacovone, Carmine A.	Eng.	1941	Springfield
Yaffe, Benjamin Samuel	Eng.	1941	Chelsea

NAME	COLLEGE CLASS		ADDRESS
Yeames, Hawtrey James	Eng.	1938	<i>Boston</i>
Yetten, Raymond S.	L.A.	1941	<i>Waltham</i>
Young, Bruce W.	Eng.	1940	<i>Belmont</i>
Young, Henry C.	B.A.	1939	<i>Whitman</i>
Young, John R.	Eng.	1939	<i>Quincy</i>
Zalewski, Henry V.	Eng.	1940	<i>Dorchester</i>
Zahariades, Michael G.	Eng.	1941	<i>New Haven, Connecticut</i>
Zallen, Maurice	Eng.	1940	<i>Dorchester</i>
Ziegler, Wilbur Charles	Eng.	1940	<i>Arlington</i>
Zimmerman, Joseph	Eng.	1939	<i>Malden</i>

Index

Absences.....	32
Academy.....	59
Accounting.....	132-135
Activities.....	57-64
Activities Assembly Hall.....	35
Administration Building.....	35
Administrative Officers.....	7
Administrative Staff.....	7-8
Admission Requirements (All Colleges).....	66-69
Advanced Standing.....	68
Advisers.....	70
Aeronautical Engineering.....	164
Air Conditioning Option.....	165
Alumni Association.....	64-65
Application for Admission.....	67-68
Assistant Professors.....	9-10
Assistants.....	13-14
Associate Professors.....	9
Athletic Association.....	57-58
Attendance.....	32
Banking and Finance.....	135-138
Banking Club.....	62
Biology.....	107-109
Biological Laboratory Equipment.....	53-54
Books and Supplies.....	29
Boston—A Great Educational Center.....	34
Buildings and Equipment.....	34-56
Business Administration, College of.....	125-150
Business Management.....	138-142
Calendar:	
Freshman.....	2
Upperclass.....	3
Calendar for College Year, 1938-1939.....	4-5
"Cauldron," College Annual.....	59
Chapel Preachers.....	16
Chemical Engineering.....	187-197
Chemical Laboratory Equipment.....	50-53
Chemical Laboratory Deposit.....	27
Chemistry.....	77-84
Civil Engineering.....	154-161
Civil Engineering Equipment.....	41-43
Class Organization and Activity.....	63
Colleges:	
Business Administration.....	125-150
Engineering.....	151-213
Liberal Arts.....	73-124
Committees of Faculty.....	11-12
Condition Examinations.....	30
Co-operative Plan.....	21-26
Correlation of Theory and Practice.....	23
Earnings.....	24
How It Works.....	21
Location of Work.....	24
Placement at Work.....	22
Positions Available.....	24
Records of Co-operative Work.....	23
Reports.....	23

Student Analysis and Counselling.....	21
Supervision and Guidance.....	22-23
Training Schedules.....	25-26
Types of Co-operative Work.....	24-25
Corporation.....	6
Courses of Instruction.....	215-225
Dean's List.....	31
Degrees:	
Liberal Arts.....	66
Business Administration.....	128
Engineering.....	151-152
Deposits, Laboratory.....	27
Design and Drafting Rooms.....	39
Diesel Option.....	166
Directory of Students.....	227-260
Discipline.....	31-32
Dormitories.....	33
Drawing.....	209
Economics.....	84-88
Education.....	109-110
Elective System, College of Liberal Arts.....	73-74
Electrical Engineering.....	178-186
Electrical Engineering Laboratory Equipment.....	47-50
Engineering Administration.....	152-153
Engineering, College of.....	151-213
Engineering Societies.....	60-61
English.....	88-93
Entrance Examinations in Boston.....	69
Entrance Requirements.....	66-69
Equipment, Laboratory.....	41-56
Examinations.....	30
Executive Council.....	7
Expenses.....	28-30
Faculty.....	7-11
Faculty Committees.....	11-12
Fees.....	27-28
Fraternities.....	60
French.....	111-112
Freshman Orientation Period.....	69
Freshman Program.....	66-71
General Library, Laboratory, and Materials Fee.....	27
General Information.....	27-33
General Officers.....	7
Geology.....	112
German.....	112-113
Government.....	114-115
Grades.....	30-31
Graduation Fee.....	28
Graduation with Honors.....	75, 128, 151
Graphic Arts.....	115-116
Gymnasium.....	35
Handbook.....	59
High School and State Clubs.....	62
History.....	116-118
Honorary Societies.....	59-60
Housing Regulations.....	32-33
Huntington Building.....	38
Industrial Chemistry Laboratory.....	52
Industrial Engineering.....	198-204
Industrial Engineering Equipment.....	53

Instructional Staff.....	8-11
Instructors.....	10-11
Inter-Fraternity Council.....	60
International Relations Club.....	61
Laboratory Building.....	38
Laboratory Deposits and Fees.....	27
Lecture Assembly Halls.....	38
Liberal Arts, College of.....	73-124
Libraries.....	39-40
List of Courses Offered.....	215-225
Location of University.....	34
Map of Vicinity.....	36
Marks.....	30-31
Mass Meeting.....	58
Mathematics.....	93-97
Mechanical Engineering.....	162-177
Mechanical Engineering Laboratory Equipment.....	43-47
Musical Clubs.....	63
Natatorium.....	35
National Engineering Societies.....	60-61
"Northeastern News".....	58-59
Northeastern Student Union.....	63-64
Northeastern University Alumni Association.....	64-65
Office and Laboratory Assistants.....	13-14
Orientation Period, Freshman.....	69
Part Time Work.....	29-30
Payments.....	28
Personal Interview.....	67
Philosophy.....	118-119
Physical Education.....	119-122
Physical Examination.....	69
Physical Training Equipment.....	38-39
Physics.....	97-102
Physics Laboratories Equipment.....	54-56
Plan of Co-operation.....	21-26
Professional Societies and Clubs.....	60-63
Professors.....	8-9
Programs of Study.....	75-76, 129-131, 152-153
Provisional Acceptance.....	68
Psychology.....	122-123
Purpose and Program.....	17-19
Radio Club.....	62
Recitation Building.....	35
Refunds.....	28
Registration.....	68
Religious Activities.....	63-64
Report Cards.....	31
Requirements for Admission.....	66-69
Requirements for Graduation:	
College of Liberal Arts.....	74-75
College of Business Administration.....	128
College of Engineering.....	151
Residence.....	33
Residence of Students by States and Countries.....	226
Rifle Club.....	62
Scholastic Year for Seniors.....	32
Secretarial Staff.....	12-13
Senate.....	59
Sigma Delta Epsilon.....	59
Sociology.....	103-106

Statistical Summary.....	20
Student Activities.....	57-64
Student Activities Fees.....	27
Student Analysis and Counselling.....	21
Student Council.....	59
Student Union.....	63-64
Subjects for Entrance.....	66-67
Subjects of Instruction.....	215-225
Supplies.....	29
Tennis Club.....	58
Thesis.....	123-124, 149-150, 212-213
Transportation.....	34
Tuition.....	27
Unclassified Courses.....	147-149, 210-211
University Lectures.....	15
Visual Education.....	52
Yearbook.....	59

OFFICE HOURS
 DEPARTMENT OF ADMISSIONS
 9 A.M. to 4 P.M. daily
 Saturday 12.00 N'N
 Wednesday Evenings by
 Appointment

Paste a Small
 Photo or
 Snapshot
 in This Space

Northeastern University

APPLICATION FOR ADMISSION

(A non-returnable fee of five dollars must accompany this application. Make checks, money orders, or drafts payable to Northeastern University)

Boston, Mass.....19

To Director of Admissions:

I (name in full).....

hereby respectfully apply for admission to the College of.....

.....to major in the field checked:

- | | | |
|--------------------------------------|--|---|
| Liberal Arts | Business Administration | Engineering |
| <input type="checkbox"/> Chemistry | <input type="checkbox"/> Accounting | <input type="checkbox"/> Civil Engineering |
| <input type="checkbox"/> Economics | <input type="checkbox"/> Banking and Finance | <input type="checkbox"/> Mechanical Engineering |
| <input type="checkbox"/> English | <input type="checkbox"/> Business Management | <input type="checkbox"/> Electrical Engineering |
| <input type="checkbox"/> Mathematics | | <input type="checkbox"/> Chemical Engineering |
| <input type="checkbox"/> Physics | | <input type="checkbox"/> Industrial Engineering |
| <input type="checkbox"/> Sociology | | |

for the school period beginning.....19....

NOTE: The applicant should fill out the following form (both sides) with care.

Residence.....Street

Town or City.....

State.....Tel.....

Date of Birth.....Age.....

Place of Birth.....

Race.....Religion.....Nationality.....

Graduate of.....High School, Year.....

Location of High School.....

Name of Principal.....

Other high schools you have attended

Names of Principals.....

If not a graduate, state the years of attendance and why you left.....

.....

Father's, Mother's, or Guardian's Name.....

.....

Address.....

Father's work, business or profession.....

Names and addresses of two other persons, to whom we may direct inquiries concerning you.

Weight.....Height.....

Have you any physical infirmities? Explain, if any.....

.....

.....

.....

.....

Defects of speech.....

Defects of hearing.....

Defects of sight.....

Bodily infirmities.....

Is your general health good, fair, or poor?.....

Have you done collegiate work elsewhere?.....

If so, name and address of college or university.....

.....

.....

Name of person who will furnish transcript of your college record.....

.....

Do you expect advance credit for past collegiate work?.....

.....

List all athletics and other extra curricula high school Activities you

have engaged in.....

.....

.....

.....

Names and addresses of all past employers with brief description of

each job, length of employment, and wages received:.....

.....

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.....

.....

Date.....

Milton J. Schlagenhauf, Director of Admissions
Northeastern University
316 Huntington Avenue
Boston, Mass.

Dear Sir:

Please send me additional information on the following points:

.....

.....

.....

.....

.....

.....

.....

.....

Name.....

Street and Number.....

Town or City.....

State.....

NORTHEASTERN UNIVERSITY

DAY DIVISION

(Open to Men Only)

The three colleges of the Day Division of Northeastern University are conducted on the co-operative plan. After the freshman year students may alternate their periods of study with periods of work in the employ of business or industrial concerns at ten-week intervals. Under this plan they gain valuable experience and earn a large part of their college expenses.

COLLEGE OF LIBERAL ARTS

Offers a broad program of college subjects serving as a foundation for the understanding of modern culture, social relations, and technical achievement. Varied opportunities available for vocational specialization. Degree: Bachelor of Science or Bachelor of Arts.

COLLEGE OF ENGINEERING

Offers curricula in Civil, Mechanical (with Diesel, Air Conditioning, and Aeronautical options), Electrical, Chemical, Industrial Engineering, and Engineering Administration. Classroom study is supplemented by experiment and research in well-equipped laboratories. Degree: Bachelor of Science in the professional field of specialization.

COLLEGE OF BUSINESS ADMINISTRATION

Offers three curricula: Accounting, Banking and Finance, and Business Management. Each curriculum represents in itself a broad survey of business technique, differing from the others chiefly in emphasis. Degree: Bachelor of Science in Business Administration.

EVENING DIVISION

(Admits Men and Women)

The schools of the Evening Division of Northeastern University offer classes for employed men and women at convenient evening hours. Students are thereby able to attend school and continue their regular employment.

SCHOOL OF LAW

Conducted in Boston. Divisions in Worcester and Springfield

Curriculum leading to the degree of Bachelor of Laws. Preparation for the practice of the law. Graduates eligible for the Massachusetts Bar Examinations. Case method of instruction. Graduate program leading to the degree of Master of Laws in Boston only. Also a pre-legal program offering the equivalent of two years of college work and preparing for admission to the School of Law.

SCHOOL OF BUSINESS

Conducted in Boston. Divisions in Worcester, Springfield and Providence

Curricula in Accounting, Business Administration, Law and Business, and Engineering and Business leading to the degree of Bachelor of Business Administration in specified fields. Preparation for C.P.A. Examinations. Shorter programs may be arranged.

For further information regarding any of the above schools, address

NORTHEASTERN UNIVERSITY

316 Huntington Avenue, Boston, Massachusetts

Telephone: KENmore 5800



NORTHEASTERN UNIVERSITY

SCHOOL OF LAW

DAY AND EVENING SESSIONS



1938 : 1939

FORTY-FIRST YEAR

Admits Men and Women

BOSTON

MASSACHUSETTS

OFFICE HOURS

JUNE 21, 1938 — AUGUST 15, 1938

Daily (except Saturdays and Sundays) 9:00 A.M.-4:00 P.M.
Saturdays, 9:00 A.M.-12:00 M.

AUGUST 16, 1938 — JUNE 19, 1939

Daily (except Saturdays and Sundays) 8:45 A.M.-9:30 P.M.
Saturdays, 8:45 A.M.-1:00 P.M.

During September, the Office is open all day Saturday.

The General Offices of the University are open from 9:00 A.M. to 9:00 P.M.
the entire year.

LIBRARY HOURS

Daily (except Sundays) 9:00 A.M.-10:00 P.M.

Sundays, 2:00 P.M.-6:00 P.M.

Holidays, 12:00 M.-6:00 P.M.

UNTIL AUGUST 1, 1938, COMMUNICATIONS SHOULD BE ADDRESSED TO

NORTHEASTERN UNIVERSITY

SCHOOL OF LAW

312 HUNTINGTON AVENUE, BOSTON, MASS.

TELEPHONE KENMORE 5800

Thereafter address the School of Law at the new location of the school:
47 Mt. Vernon Street, Boston, Mass.

NORTHEASTERN UNIVERSITY

The Forty-first Annual Catalogue

of the

School of Law

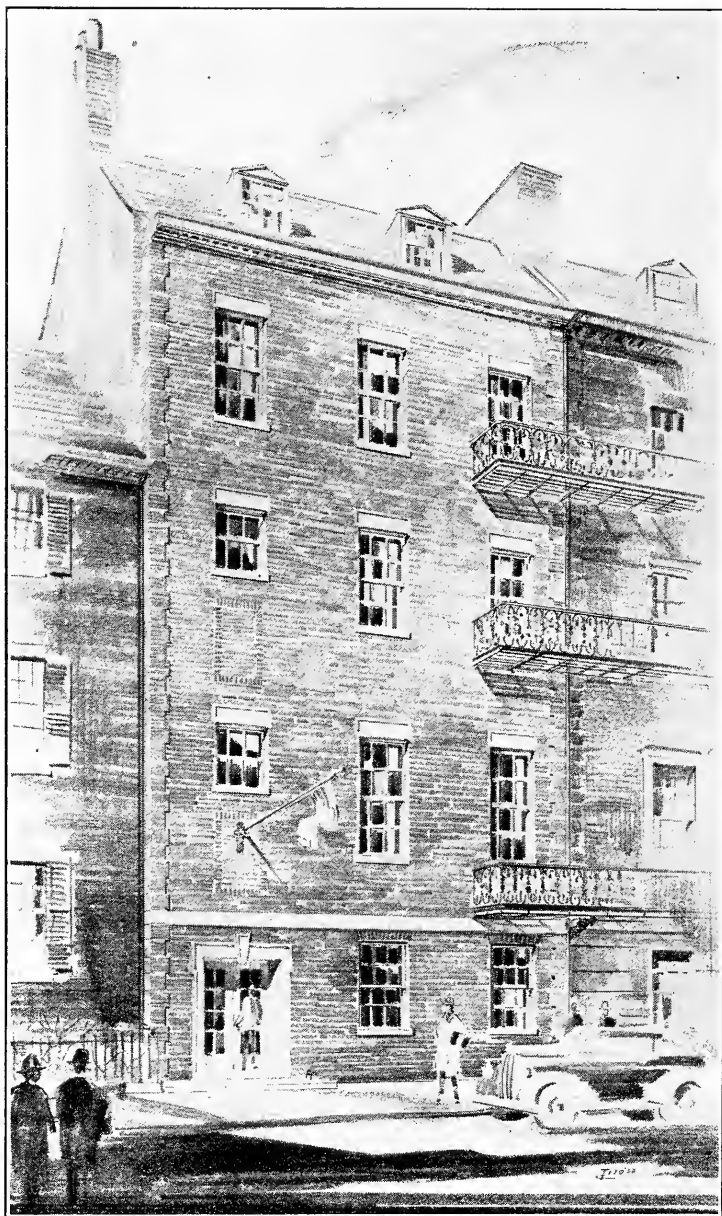
FOUR-YEAR EVENING PROGRAM

THREE-YEAR DAY PROGRAM

1938-1939



Case Method of Instruction
High Scholastic Standards
Sound Professional Ideals



Law School Building

CONTENTS

	Page
Calendar	4
NORTHEASTERN UNIVERSITY	
The University Corporation	5
The Executive Council	5
Purpose and Program	6
Organization	7
Statistical Summary	8
SCHOOL OF LAW	
Administrative Staff	9
Faculty	9
Secretarial Staff	10
Faculty Committee on Administration	10
Historical Statement	11
The Law School Building	11
Admission of Students	
Candidates for the Degree of Bachelor of Laws	12
Advanced Standing	12
Special Students	12
Readmission	12
To Graduate Courses	13
Method of Instruction	14
The Law Curricula	
Day	14
Evening	14
Master's Course	14
The Courses of Instruction	
Undergraduate	15
Graduate	19
Requirements for Degrees	23
General Information	
Registration	25
Tuition and Fees	25
Attendance and Examinations	25
Grades	26
Scholarships and Prizes	27
Library	28
Colleges Represented in the Student Body	29
Degrees Conferred in 1937	30
Students	30

CALENDAR

DAY CLASSES

1938-1939

FIRST SEMESTER

19 Sept.	Monday	Registration begins.
26 Sept.	Monday	Class lectures begin.
12 Oct.	Wednesday	Legal holiday (classes omitted).
11 Nov.	Friday	Legal holiday (classes omitted).
21 Nov.	Monday	Payment of second installment of tuition due.
23 Nov.	Wednesday	1:10 P.M. Thanksgiving Recess begins.
28 Nov.	Monday	9 A.M. Classes resumed.
20 Dec.	Tuesday	4 P.M. Christmas Recess begins.
3 Jan.	Tuesday	9 A.M. Classes resumed.
23 Jan.-28 Jan.		First semester examinations.

SECOND SEMESTER

30 Jan.	Monday	9 A.M. Class lectures begin.
30 Jan.	Monday	Payment of third installment of tuition due.
22 Feb.	Wednesday	Legal holiday (classes omitted).
20 March	Monday	Payment of final installment of tuition due.
19 April	Wednesday	Legal holiday (classes omitted).
22 May-5 June		Final examinations.

EVENING CLASSES

1938-1939

1938

7 Sept.	Wednesday	Junior and Sophomore class lectures begin.
8 Sept.	Thursday	Senior class lectures begin.
13 Sept.-22 Sept.		Make-up examinations.
19 Sept.	Monday	Freshman class lectures begin.
12 Oct.	Wednesday	Legal holiday (classes omitted).
11 Nov.	Friday	Legal holiday (classes omitted).
21 Nov.	Monday	Payment of second installment of tuition due.
24 Nov.	Thursday	Legal holiday (classes omitted).
19 Dec.	Monday	Last class lectures before the Christmas recess.

1939

3 Jan.	Tuesday	First class lectures following the Christmas recess.
23 Jan.	Monday	Payment of third installment of tuition due.
22 Feb.	Wednesday	Legal holiday (classes omitted).
20 March	Monday	Payment of final installment of tuition due.
19 April	Wednesday	Legal holiday (classes omitted).
30 May	Tuesday	Legal holiday (classes omitted).
18 June	Sunday	Baccalaureate Address.
19 June	Monday	Commencement.

THE NORTHEASTERN UNIVERSITY CORPORATION

ROBERT GRAY DODGE
Chairman

FRANK LINCOLN RICHARDSON
Vice-Chairman

FRANK PALMER SPEARE
President of the University

CHARLES FRANCIS ADAMS	HOWARD MUNSON HUBBARD
WILMAN EDWARD ADAMS	ARTHUR STODDARD JOHNSON
ROGER AMORY	HENRY CAMPBELL JONES, JR.
EARL D. BABST	HALFDAN LEE
ROBERT BALDWIN	EDWARD ABBOTT MACMASTER
ARTHUR ATWOOD BALLANTINE	JOHN RUSSELL MACOMBER
GEORGE LOUIS BARNES	JOSEPH PATRICK MANNING
THOMAS PRINCE BEAL	HAROLD FRANCIS MASON
FARWELL GREGG BEMIS	HUGH DEAN McLELLAN
PAUL CODMAN CABOT	IRVING EDWIN MOULTROP
WALTER CHANNING	CLARENCE LUCIAN NEWTON
WILLIAM CONVERSE CHICK	OLAF OLSEN
EVERETT AVERY CHURCHILL	ANDREW JAMES PETERS
PAUL FOSTER CLARK	GEORGE EDWIN PIERCE
SEARS B. CONDIT	ROGER PIERCE
ALBERT MORTON CREIGHTON	MATTHEW POROSKY
WILLIAM JAMES DAVIDSON	FREDERICK SANFORD PRATT
JAMES DEAN	HARRY WENDELL PROUT
HENRY STURGIS DENNISON	SIDNEY RABINOVITZ
PAUL AUGUSTUS DRAPER	JAMES LORIN RICHARDS
CHARLES FRANCIS EATON	CHARLES MILTON ROGERSON
CARL STEPHENS ELL	ROBERT BILLINGS RUGG
JOSEPH BUELL ELY	LEVERETT SALTONSTALL
TIMOTHY JAMES FALVEY	SABIN POND SANGER
FREDERIC HAROLD FAY	RUSSELL HENRY STAFFORD
ALLAN FORBES	FRANCIS ROBERT CARNEGIE STEELE
EDWARD J. FROST	CHARLES STETSON
FRANKLIN WILE GANSE	ROBERT TREAT PAINE STORER
GEORGE PEABODY GARDNER, JR.	FRANK HORACE STUART
HARVEY DOW GIBSON	EDWARD WATSON SUPPLE
MERRILL GRISWOLD	JOHN EDWIN TOULMIN
HENRY INGRAHAM HARRIMAN	BAYARD TUCKERMAN, JR.
CHANDLER HOVEY	ELIOT WADSWORTH
	EDWIN SIBLEY WEBSTER

GALEN DAVID LIGHT
Secretary and Treasurer

THE EXECUTIVE COUNCIL

FRANK PALMER SPEARE, M.H., LL.D., *President of the University*

GALEN DAVID LIGHT, A.B., *Secretary and Treasurer of the University*

CARL STEPHENS ELL, A.B., M.S., Ed.M., Sc.D., *Vice-President of the University*

EVERETT AVERY CHURCHILL, A.B., Ed.D., *Vice-President of the University*

NORTHEASTERN UNIVERSITY

PURPOSE AND PROGRAM

NORTHEASTERN University from the outset has been developed around the simple yet practical purpose of meeting human needs in distinctive and serviceable ways, maintaining flexibility in program and organization in order that constant adjustment could be made to changing needs. The faculties of the University have been selected because of their understanding and appreciation of student problems and needs and their ability to teach and to guide students effectively.

Pursuant to this purpose, the University has evolved a definite plan of education which embraces primarily Co-operative Education by day and Adult Education by night. So far as the New England States are concerned, Northeastern University is the only institution whose day colleges, other than the School of Law, are conducted under the Co-operative Plan. The several schools and programs of the University are operated either under the name "Northeastern University" or by its affiliated schools, the Lincoln Schools, and The Huntington Day School for Boys. The following is a brief outline of the principal types of educational opportunities offered.

1. In the field of Co-operative Education there are three day colleges—the College of Liberal Arts, the College of Engineering, and the College of Business Administration. All of these colleges offer five-year curricula. The College of Liberal Arts offers majors in the usual fields of the arts and the sciences leading to the degrees of Bachelor of Arts and Bachelor of Science. The College of Engineering, one of the largest engineering colleges in the United States, has curricula in Civil, Mechanical (with Diesel, Air-Conditioning, and Aeronautical options), Electrical, Chemical, and Industrial Engineering. The College of Business Administration has curricula in Accounting, Banking and Finance, and Business Management. The College of Engineering and the College of Business Administration confer the degree of Bachelor of Science with specification indicating the field of specialization. The Co-operative Plan under which all of these day colleges operate enables the student to alternate regular periods of classroom instruction with supervised employment in an industrial or commercial position, thus combining theory and practice in an exceedingly effective manner. Apart from the educational advantages of the Co-operative Plan is the opportunity for self-support while the student is pursuing his studies at Northeastern University. During the co-operative periods, students not only gain experience but are also paid for their services. Approximately three hundred business and industrial concerns co-operate with Northeastern University in making this program effective.
2. The School of Law conducts both a day and an evening undergraduate program which prepares for admission to the bar and for the practice of the law and leads to the degree of Bachelor of Laws.

It also conducts a graduate program in the evening leading to the degree of Master of Laws.

3. The Adult Education Program has been developed in the evening work of the School of Law as indicated above and in the School of Business whose classes meet in the evening. The School of Business has curricula in Management, Accounting, Law and Business and Engineering and Business. This School awards the Bachelor of Business Administration degree with specification. A pre-legal program is also available in the evening offering the equivalent of two years of college work and preparing for admission to the School of Law.
4. In order that larger groups of men and women might be served through its evening schools, Northeastern University operates divisions of the School of Law and the School of Business in co-operation with the Young Men's Christian Association in Worcester and Springfield and of the School of Business in co-operation with the Providence Young Men's Christian Association. With the establishment of the divisions, thoroughgoing methods of supervision were instituted and have been consistently followed and improved, with the result that the divisional work is conducted upon a highly efficient basis.
5. The Adult Education Program has also been developed through the Lincoln Schools, which are affiliated with and conducted by Northeastern University. The classes in these schools are held at convenient evening hours. The Lincoln Technical Institute offers curricula upon a junior college level in various phases of engineering; whereas the Lincoln Preparatory School, accredited by the New England College Entrance Certificate Board, prepares students for admission to college and offers other standard high school programs.
6. The Huntington Day School for Boys, also affiliated with and conducted by Northeastern University, is the outgrowth of a demand in the city of Boston for an urban preparatory school with high educational standards, which would furnish thorough preparation for admission to the leading colleges and universities. While easily accessible to the various sections of Boston and to the suburbs, it has the facilities of a country day school and offers a country day school program. This School is one of the leading preparatory schools of the country.

ORGANIZATION

Northeastern University is incorporated as a philanthropic institution under the General Laws of Massachusetts. The State Legislature, by special enactment, has given the University general degree granting powers.

The Corporation of Northeastern University consists of men who occupy responsible positions in business and the professions. This Corporation elects from its membership a Board of Trustees in whom the

control of the institution is vested. The Board of Trustees has four standing committees: (a) an Executive Committee which serves as an Ad Interim committee between the regular meetings of the Board of Trustees and has general supervision of the financial and educational policies of the University; (b) a Committee on Housing which has general supervision over the buildings and equipment of the University; (c) a Committee on Funds and Investments which has the responsibility of administering the funds of the University; (d) a Development Committee which is concerned with furthering the development plans of the University.

The Board of Trustees has also created, through its by-laws, an Executive Council, consisting of the President, the Secretary, and the two Vice-Presidents of the University. To the Executive Council the Board has allocated broad powers.

NORTHEASTERN UNIVERSITY AND AFFILIATED SCHOOLS

STATISTICAL SUMMARY

1936-1937

	Administrative Officers and Faculty	Students
I. General Administration	8	
II. Northeastern University		
College of Liberal Arts		
College of Engineering		
College of Business Administration	71	1,757
School of Law	52*	1,554*
School of Business	91*	1,277*
III. Schools affiliated with and conducted by Northeastern University		
Lincoln Schools	49	965
Huntington Day School for Boys		
Regular Term	17	188
Summer Term	9	111
Total	297	5,852
Less Duplicates	35	381
Net Total	262	5,471

*These figures include the administrative officers, faculties and students of the Divisions of the University in Worcester, Springfield and Providence.

SCHOOL OF LAW

ADMINISTRATIVE STAFF

FRANK PALMER SPEARE, M.H., LL.D., *President of the University*
EVERETT AVERY CHURCHILL, A.B., ED.D., *Vice-President of the University*
GALEN DAVID LIGHT, A.B., *Secretary and Treasurer of the University*
SYDNEY KENNETH SKOLFIELD, A.B., *Dean*

EBEN OSWELL SMITH, B.S., *Registrar of the Evening Division*
J. KENNETH STEVENSON, B.C.S., *Bursar*
MYRA EDNA WHITE, *Librarian of the University*
MARY B. FOOR, *Manager of the Bookstore*

FACULTY

OSCAR STORER, A.B., LL.B. (1898)*
Torts

ELIAS FIELD, A.B., LL.B. (1912)*
Property I, Property II

ARTHUR WILLIS BLACKMAN, B.A., LL.B. (1918)*
Equity

HAROLD PENDEXTER JOHNSON, A.B., LL.B. (1918)*
Mortgages, Property III

MAYO ADAMS SHATTUCK, A.B., LL.B. (1923)*
Trusts

MELVILLE FORREST ROGERS, LL.B., LL.M. (1926)*
Common Law Pleading, Personal Property, International Law
Counsellor to Students

JOHN VARNUM SPALDING, A.B., LL.B. (1926)*
Evidence

DWIGHT MERRILL ALDEN, A.B., LL.B. (1927)*
Counsellor to Students

RICHARD HENRY LEE, A.B., LL.B. (1930)*
Sales

HIBBARD RICHTER, A.B., LL.B. (1930)*
Constitutional Law

DON DAY SWAIN, A.B., LL.B. (1930)*
Bills and Notes
(On leave of absence 1938-39)

*Date of appointment

- EDWIN WILSON HADLEY, A.B., J.D., LL.M. (1931)*
Contracts, Business Associations, Administrative Law, Public Utilities
- EMMA FALL SCHOFIELD, A.B., LL.B., LL.M. (1932)*
Counselloer to Women Students
- STUART MACMILLAN, Ph.B., LL.B. (1935)*
Conflict of Laws
- WILLIAM MACY MARVEL, A.B., LL.B. (1935)*
Wills
- ROBERT RAYMOND ELLIOTT, B.S., LL.B. (1936)*
Criminal Law, Legal Research for Practitioners
- DANA TAYLOR GALLUP, A.B., A.M., LL.B. (1936)*
Landlord and Tenant, Conveyancing Seminar, Taxation
- LEON BETTONEY NEWMAN, A.B., LL.B. (1936)*
Massachusetts Practice, Appellate Practice and Briefs, Damages
- FELIX FORTE, M.A., LL.M., S.J.D. (1937)*
Bills and Notes

SECRETARIAL STAFF

- ELIN VICTORIA PETERSON, *Secretary to the Vice-President*
 ELIZABETH SAYLES, *Secretary to the Dean*
 ISABEL CRAIG RAMSAY, *Recorder*
 ELIZABETH BRECHEN HUNT, *Secretary to the Registrar*
-

FACULTY COMMITTEE ON ADMINISTRATION

- | | |
|--|-------------------------|
| EVERETT AVERY CHURCHILL, <i>Chairman</i> | |
| SYDNEY KENNETH SKOLFIELD, <i>Dean</i> | ARTHUR WILLIS BLACKMAN |
| OSCAR STORER | MAYO ADAMS SHATTUCK |
| ELIAS FIELD | MELVILLE FORREST ROGERS |

*Date of appointment

HISTORICAL

NORTHEASTERN University School of Law was established in 1898 as an evening school primarily to meet the needs of men and women of ability who desired a knowledge of the law but who were employed and therefore unable to attend a day school. Co-operating in its establishment and the conduct of its work were the Honorable James R. Dunbar, Professor James Barr Ames, then Dean of the Harvard University School of Law, and Samuel Bennett, then Dean of Boston University School of Law. Later such men as Ezra Thayer, Dean of Harvard University School of Law, Samuel Elder, and Robert G. Dodge were active upon the Corporation of the school and were largely instrumental in shaping its policies and its development. The school has had over the years an unusual faculty of men who have been outstanding leaders in the profession. It has also enjoyed highly favorable recognition and endorsement by the bench and by the bar. The growth and influence of the school has been marked. Its graduates who have entered the practice of the law are men of high professional attainment. Many of the alumni occupy positions of leadership as executives in various fields of business.

For several years the Board of Trustees of Northeastern University have contemplated expanding the program of the Law School to include in addition to its evening work a day program. With the purchase and remodeling of the new Law School building at 47 Mt. Vernon Street it seemed to the Trustees that the time had finally come to establish a day school. Accordingly, definite action has been taken whereby Northeastern University will open a day Law School, entering its first freshman class in September 1938. The Trustees have instructed the officers of administration to put into effect in planning the day work such educational policies as will insure the Law School's maintaining, both in its day and evening programs, those standards which are in accord with the requirements of the standard accrediting association for professional education in the field of the law. Through its day and evening undergraduate program leading to the Bachelor of Laws degree and through its graduate program leading to the Master of Laws degree, the School of Law extends its services to a much wider group of students who earnestly desire an effective preparation for the practice of the law or who feel that a knowledge of the law is an effective means to successful executive work in business.

THE LAW SCHOOL BUILDING

The School of Law Building is located at 47 Mt. Vernon Street within a few minutes' walk of the State House and of the Court House, where the Supreme Judicial Court, the Superior Court for Suffolk County, the Land Court, the Probate Court for Suffolk County, and the Municipal Court for the City of Boston are housed. The Law School Building has excellent classroom facilities, adequate library areas, and administrative and instructional offices. Opportunities are provided for study, effective use of the library, and contacts with the faculty outside the classroom.

ADMISSION OF STUDENTS

A blank form of application for admission will be furnished by the Dean of the Law School upon request. All applicants for admission must fill out and file this form together with (1) an official certificate of the college work completed, (2) a letter of reference concerning character and ability. It is advisable that the matter of admission be settled in advance of the opening of school. The necessary application for admission and other credentials required should be filed as far in advance of the registration period as possible. Applicants must be of good moral character and possess general fitness for the study of the law.

Candidates for the Degree of Bachelor of Laws. These admission requirements apply to students enrolling either for the day or the evening law school curriculum. Women are admitted to the School of Law under the same conditions as men.

An applicant for admission as a candidate for the degree of Bachelor of Laws must, at the time of admission and prior to the commencement of his law study, have met one of the following educational requirements:

1. Graduation from an approved college or university.
2. Satisfactory completion of at least one-half of the work required and acceptable for the Bachelor's degree in a college or university approved by the Committee on Administration.

Advanced Standing. A student who has complied with the entrance requirements for regular first-year law students prior to beginning his law study and who has successfully completed one or more years of law work in a law school of approved standing may, upon the presentation of a certificate of scholarship and of honorable dismissal from such school, be admitted to advanced standing in this school to the extent and on such conditions as the full-time faculty may prescribe. No applicant will be admitted, either as a candidate for advanced standing or for admission to the first-year class, who shall have previously attended another law school and who can not return to that school in good standing.

Special Students. A limited number of applicants, who are at least twenty-three years of age and who can not qualify under the foregoing requirements for admission as candidates for the degree of Bachelor of Laws, may, in exceptional cases and at the discretion of the full-time faculty, be admitted to the Law School as special students. Applicants for admission as special students must give evidence of such general education and experience as will enable them to carry on and profit by the work of the school.

Re-Admission. Former students who have not been registered in the School during the two school years immediately preceding that in which they seek re-admission to the School will be re-admitted only at the discretion of the full-time faculty and under the following conditions:

- (a) They must meet the requirements for admission effective for the entering class in the year in which they seek re-admission.
- (b) They must meet the scholastic requirements which apply to the class to which they may be re-admitted.
- (c) They shall be subject to all rules and regulations effective in the School at the time of, or subsequent to, re-admission.

Graduate Courses. Any person who has satisfactorily completed such pre-legal work as will entitle him to admission to this school as a candidate for the LL.B. degree, and subsequent to such pre-legal study has received the degree of LL.B., or an equivalent degree, from an approved school of law, may, upon the approval of the Dean, be admitted to the Master's course as a candidate for the degree of Master of Laws (LL.M.).

One who meets the requirements for admission as a candidate for the LL.M. degree, and who desires a knowledge of particular courses because of their relation to his practice or for their cultural values, but not intending to pursue the entire program, may enroll for individual courses.

METHOD OF INSTRUCTION

Instruction is offered in the various courses named in the curricula. The primary purpose of the School is to prepare for the practice of the law wherever the English common law system prevails, particular attention being given to the law of Massachusetts and the other New England states. To accomplish this aim, the instruction is designed to train the students in the fundamental principles of the common law and to develop their powers of legal reasoning and analysis. The instruction is based on the case method combining the study of basic principles with the analysis and interpretation of decided cases. Such analysis and discrimination constitutes a large portion of the work of a lawyer in his active practice. No knowledge of principles acquired wholly apart from the facts upon which they arise can replace the practical values which come from the actual dissection and analysis of cases by the student in his study or with the instructors in the classroom. Furthermore the knowledge of the law and the understanding of the growth and development of the law, which the student acquires through the case system, gives him a basis upon which to build as the law grows.

The case method of instruction as used at Northeastern, based on the preparation of assigned cases in advance of the class period, develops an interest and enthusiasm for the law which is not found under other than the case method, and, which is more important, develops that soundness of legal reasoning and knowledge of the law so essential to success at the bar.

THE LAW CURRICULA

Three-Year Day Course. The completion of the course of study in the day curriculum requires that students shall be in regular attendance for three full school years and shall devote substantially all of their working hours to their law studies. A minimum of eighty-two semester hours of classroom instruction is required during the three-year period.

Four-Year Evening Course. The evening law school course covers a period of four school years of thirty-six weeks each and is equivalent in content and the number of classroom hours to the day program.

Master's Course. Students who are candidates for the degree of LL.M. must be in residence at least two academic years. The Master's courses are all offered in the evening.

THE COURSES OF INSTRUCTION

The University reserves the right to withdraw, modify or add to the courses offered, or to change the order of courses as may seem advisable.

Undergraduate Courses

AGENCY.

2 SEMESTER HOURS.

Agency defined; actual or ostensible; agency distinguished from trust, from sale, from lease; creation of the relation; scope of agency; authority and power of agent, manner of execution of authority; effect of relations as between principal and agent, between agent and third persons, and between principal and third persons; liability of principal for acts of agent; liability and rights by ratification; delegation of authority; duties and liabilities of the agent to third persons, to principal; undisclosed principal; duration and termination of relation. Mechem's *Cases on Agency* (2d ed.).

BANKRUPTCY.

2 SEMESTER HOURS.

The course will cover the history of bankruptcy legislation, state and national; extent and operation of state insolvency laws; who may become a bankrupt; who may be petitioning creditors; acts of bankruptcy, including fraudulent conveyances, preferences and assignments for the benefit of creditors; what property passes to the trustee; dissolution of liens; what claims are provable against the bankrupt's estate; duties and powers of the trustee; duties of the bankrupt; discharge from bankruptcy; compositions in the bankruptcy court; bankruptcy procedure.

BILLS AND NOTES.

4 SEMESTER HOURS.

The provisions of the General Laws of Massachusetts, Chapter 107 — Negotiable Instruments Law (in Massachusetts only). Formal requisites of negotiable and non-negotiable bills of exchange, checks and notes; obligations and rights of the various parties to such instruments, makers, acceptors, drawers, drawees, payees, indorsers and indorseees; suits upon bills and notes; pleading and defenses, accommodation paper, bankers' and trade acceptances; letters of credit; guaranty and generally of the transfer, negotiation and extinguishment of bills and notes. Aigler's *Cases on Negotiable Paper and Banking*.

BUSINESS ASSOCIATIONS.

6 SEMESTER HOURS.

I, The nature of a corporation; II, Intra corporate problems, voting control, management, stockholders' rights, control by managers, securities; III, Inter corporate problems, powers of corporations, unauthorized corporate action, ultra vires, rights of creditors, reorganization.

Embracing the creation of partnership; rights and duties of partners among themselves; power of partners to bind firm; individual liability of partners; dissolution. Canfield and Wormser's *Cases on Private Corporations* (3d ed.).

COMMON LAW PLEADING.

2 SEMESTER HOURS.

The Case Method of law instruction, its origin and a comparison of it with other methods of instruction; the sources of our law; constitutions, common law and statutes; distinctions between law and equity; divisions of the law, civil, criminal and otherwise; adjective law and substantive law; the common law, its origin and underlying principles; the doctrine of *stare decisis*; the relative value of textbooks, casebooks, digest and the reports; how to read and abstract a case; differentiation between decision and dicta; imperative and persuasive authorities. Procedure from the original writ to appeal and review of judgment; how a right may be enforced and a remedy obtained in the courts; venue of actions; forms of actions, local and transitory, real, personal and mixed; original and judicial writs; pleadings, their necessity, uses, forms and rules by which they are governed; the effect of pleadings in conduct and results of the trial; protection of rights of the parties before, during and after trial, and before and after judgment; revision of proceeding, exceptions, appeal and review. Keigwin's *Cases on Common Law Pleading* (2d ed.).

CONFLICT OF LAWS.**4 SEMESTER HOURS.**

General background and theoretical bases of Conflict of Laws and rules for the application of Conflict of Laws principles; general requirements of domicile; domicile by operation of law; definition and character of jurisdiction; jurisdiction of courts; a consideration of various problems of family law with emphasis on marriage, divorce, legitimacy and adoption; property interests including movables and immovables; intangibles and matrimonial property interests; torts; contracts and related obligations including foreign judgments and other imposed duties; procedural matters; and administration of estates, trusts and receiverships. Cheatham, Dowling, and Goodrich, *Cases on Conflict of Laws*, with supplement.

CONSTITUTIONAL LAW.**4 SEMESTER HOURS.**

Written and unwritten constitutions; history and sources of written constitutions in the United States, state and national; establishing and amending constitutions; distribution of powers between the national and state governments; distribution of powers among the three departments; the judicial department; nature of judicial power; jurisdiction of the federal government, criminal and civil; express, implied, resulting and inherent powers; functions of administrative officers; citizenship; civil and political rights; the police power; the right of eminent domain; taxation; impairment of contracts, *ex post facto* and retrospective legislation generally, regulation of commerce. Long's *Cases on Constitutional Law* (3d ed.).

CONTRACTS.**6 SEMESTER HOURS.**

Offer and acceptance; consideration; performance of, or promise to perform, an existing legal obligation as consideration; moral obligation as consideration; past or executed consideration; parties to a contract, including aliens, executors and administrators, guardians, infants, insane persons, intoxicated persons and married women (omitting agents, corporations and partners as these subjects are given in other courses); contracts under seal, including the form, requisites thereof, delivery and the matter of consideration; rights of beneficiaries under a contract; rights of assignees of a contract; conditions in contracts; rescission of contracts; damages for breach of contract; illegality; duress; mistake; statute of frauds, quasi-contracts. Costigan's *Cases on Contracts* (3d ed.).

CRIMINAL LAW.**3 SEMESTER HOURS.**

Sources of criminal law; the elements of crime; effect of consent, condonation, negligence, or other misconduct of person injured, coercion and necessity; criminal intent; effect of mistake of fact, infancy, insanity, and intoxication; the criminal act; attempts; parties in crimes; assault and battery; mayhem; false imprisonment; abortion; rape; murder and manslaughter; larceny; embezzlement; obtaining property by cheats and false pretenses, receiving stolen property; burglary; arson; forgery; libel; perjury; conspiracy; criminal procedure in Massachusetts. Sayre's *Cases on Criminal Law*.

DOMESTIC RELATIONS.**2 SEMESTER HOURS.**

The law of husband and wife, the contract to marry; nature and requirements of marriage; relations between husband and wife; parent and child; dissolution of marriage by annulment, divorce and judicial separation. Jacob's *Cases on Domestic Relations*.

EVIDENCE.**5 SEMESTER HOURS.**

Rules of evidence in the Federal Courts; machinery of the trial; examination of witness; refreshing recollection of witnesses; impeachment and corroboration of witnesses; admissions and confessions; character evidence; the opinion rule and the expert witness; the hearsay rule; statutory exceptions to the hearsay rule; common law exceptions to the hearsay rule including dying declarations, statements of fact against interest, pedigree, entries in the regular course of business, official records, declarations as to physical and mental conditions, *res gestae*; real evidence; best evidence rule; authentication of documents; handwriting evidence; privilege against self-crimination; privileges based on the marriage relationship; attorney-client privilege; judicial notice; the parol evidence rule; presumptions and burden of proof. Morgan and Maguire's *Cases on Evidence*, with Leach's *Supplement*.

EQUITY.**6 SEMESTER HOURS.**

I. A thorough study of the nature of equity jurisdiction and the principles of equity as developed in the law of specific performance of contracts, the law of equitable servitudes on land and chattels, the law of vender and purchaser, and the law of relief against torts. Chafee and Simpson's *Cases on Equity* (2 vols.); Chafee's *Cases on Equitable Relief against Torts*.

II. Miscellaneous equitable remedies, including interpleader, bills of peace, bills quia timet, reformation and rescission for mistake; recognition of decrees of other states for payment of money, conveyance of land, foreclosure; injunctions against foreign suits; and a study of border line torts affecting reputation, privacy, and the freedom of individual life. Chafee's *Equitable Remedies*.

HISTORY, ORGANIZATION AND STANDARDS OF THE LEGAL PROFESSION.**2 SEMESTER HOURS.**

This course considers the Anglo-American historical background of the legal profession and of American Judicial Institutions. The organization, purposes and standards of the American Bar, and particularly of the Bar of Massachusetts. A discussion of problems of interest to the profession relating to the status, functions, duties and responsibilities of the lawyer, and the problems of professional conduct confronting the practitioner. Arant's *Cases on Legal Ethics*.

INSURANCE.**2 SEMESTER HOURS.**

The history, nature and development of the general principles of insurance law as applied to the various forms of insurance contracts with respect to insurable interest, concealment, misrepresentation, warranties, and other causes of invalidity of the contract; amount of recovery, subrogation, conditions, waiver, estoppel, election and powers of agents, assignees and beneficiaries. Goble's *Cases and Other Materials on Insurance*.

LANDLORD AND TENANT.**2 SEMESTER HOURS.**

Leases distinguished from licenses; special emphasis on the drafting of leases with relation to particular types of premises and particular needs of parties; creation and termination of leases for years, at will and at sufferance; special emphasis on liability in tort of both landlord and tenant for defects in the premises.

MASSACHUSETTS PRACTICE AND PLEADING AT LAW AND IN EQUITY.**2 SEMESTER HOURS.**

Divisions of courts in Massachusetts and jurisdiction of each; venue of actions, writs and service of same; indorser for costs; attachment of property on mesne process, by trustee process, and in equity; arrest on mesne process; entry of actions; appearances; non-suits and defaults; the Practice Act; the pleadings including declarations, motions to dismiss, answers and pleas in abatement, demurrers, and answers and pleas in bar; amendments; specifications; interrogatories; depositions; demand to admit facts; set-off, recoupment and cross actions; marking cases for trial; advancing actions for speedy trial; auditors, masters and assessors; tender and offer of judgment; motions, claim for jury trial; jurors, summoning witnesses; procedure at trial; verdicts; motions for new trial; motions in arrest of judgment; appeals; exceptions; reports; reservations; judgments; executions.

MORTGAGES.**2 SEMESTER HOURS.**

The characteristic mortgage doctrines; the long and statutory short forms; equitable mortgages; construction loan mortgages; deficiency judgments; effect of passage of time on mortgages; taxes; insurance; assignment by mortgagee and mortgagor; merge; partial release and discharge; marshaling; special emphasis on the practice of foreclosure; redemption.

MUNICIPAL CORPORATIONS.**2 SEMESTER HOURS.**

The nature, creation, constitution, control alteration, and dissolution of municipal corporations; their charters, proceedings, officers, and agents; powers and liabilities, taxation and indebtedness.

OFFICE PRACTICE.**1 SEMESTER HOUR.**

This is a practical course covering the fundamental principles of drafting legal documents, including contracts, conditional sales, conveyances, mortgages, leases, wills, trusts, partnership agreements, etc. It also covers the problems of office management, as to personnel, office records, correspondence, filing system, time recording, valuation and billing, clients' accounts, and office library. Considerable time is given to the use of law books and the preparation of cases.

PERSONAL PROPERTY.**3 SEMESTER HOURS.**

Distinction between real and personal property; possession, bailment; finder; lien; pledge; acquisition of ownership in chattels, including bona fide purchase, adverse possession, accession, confusion, judgment, satisfaction of judgment, and gift; fixtures and emblements. *Fraser's Cases and Readings in Property* (Vol II.).

PRACTICE COURT.**1 SEMESTER HOUR.**

The Practice Court supplements the course in Common Law Pleading and is under the control and direction of the faculty. The purpose of the court is to give the students an opportunity to apply their knowledge of pleading and procedure and their knowledge of the substantive law in the conduct of an actually litigated controversy. The practice, so far as is possible, follows that of actual litigation. The senior students are divided into groups, or firms of lawyers, two in each group representing the plaintiff and two the defendant. These firms institute their actions in the various courts and conduct them through their various stages to final judgment or decree. The work of the Practice Court is required of all regular students and must be performed satisfactorily as a condition of promotion.

PROPERTY I.**3 SEMESTER HOURS.**

Possession; air; land; streams; surface waters; underground waters; rights of reversioners; profits; easements; licenses; legal enforcement of covenants running with the land; equitable enforcement of agreements running with the land; rents, waste; public rights in waters and highways. *Bigelow's Cases on Rights in Land* (2d ed. 1934).

PROPERTY II.**3 SEMESTER HOURS.**

Feudal system of land tenure; estates in land, including historical development of methods of creating and conveying the same; reversions, remainders and other non-possessory interests in land; concurrent ownership; disseisin and the remedies therefor; uses and trusts, including the statute of uses; accretion, adverse possession; prescription; voluntary conveyances; form of deeds; description of property granted; estates created; creation and incidents of joint tenancy; tenancy in common and tenancy by entirety; creation of easements and profits; covenants for title; execution of deeds; recording; estoppel by deed; dedication; examination of titles. *Bigelow's Introduction to the Law of Real Property*; *Warren's Cases on Conveyances*.

PROPERTY III.**3 SEMESTER HOURS.**

Future and conditional interests in property.

Estates on condition, rights of entry for condition broken, license and waiver of breach, possibilities of reverter, reversions, vested and contingent remainders, future uses, executory devises and bequests, failure of executory devises, construction of limitations, cross-limitations, vesting of legacies, gifts on failure of issue, ascertainment of classes, powers, rule against perpetuities, restraints on alienation, illegal and impossible conditions. *Kale's Cases on Future Interests* (2d ed.).

SALES.**3 SEMESTER HOURS.**

Sales and mortgages of personal property; historical and philosophical basis of this branch of law; subject matter of a sale; parties to a sale; the effect of fraud; passage of title; risk of loss; rights of the seller under the contract; conditional sales; documents of title; warranties expressed and implied; the rights of the buyer under the contract, and formalities of the contract. *Bogert and Britton's Cases on Sales*.

SURETYSHIP.**2 SEMESTER HOURS.**

Rights of the creditor; rights of the surety against the principal, including reimbursement, subrogation and exoneration; rights of a surety against a cosurety, including subrogation and contribution; subsuretyship; creditor's interest in securities held by the surety; problems arising out of bankruptcy and insolvency; the statute of frauds; the surety's other defenses against the creditor. Campbell's *Cases on Suretyship*.

TORTS.**6 SEMESTER HOURS**

Definition of tort; theory of liability in tort; distinctions between tort and breach of contract; defenses to torts or apparent torts; assignability of right of action in tort; damages; discharge of torts; disability, including responsibility of infants, married women, insane persons, municipal corporations and charities for torts; assault and battery; false imprisonment; trespass to property; slander and libel; slander of title; enticement and seduction; loss of consortium; deceit; infringement of trademarks; malicious prosecution; negligence. Bohlen and Harper's *Cases on Torts* (special edition).

TRUSTS.**4 SEMESTER HOURS.**

Embracing the nature of a trust including analytical and practical distinctions between trusts and bailments, debts or contracts, conditions, mortgages and other relationships with emphasis upon the relation between banker and customer and broker and customer; the creation of a trust including intention, matters of consideration and the statutes of frauds and wills; the elements of a trust, its subject matter, the trustee and the *cestui que trust*; the charitable or public trust; resulting and constructive trusts and a consideration of typical situations where trusts are imposed by law; the administration of trusts; the nature of the *cestui que trust's* interest; powers and duties of the trustee, the investment of trust funds and the liabilities of the trustee to the beneficiary; liabilities to third persons; the doctrine of *bona fide* purchase and the consideration of what persons are bound by a trust; the transfer of the interest of the *cestui que trust* and the termination of a trust. Scott's *Cases on Trusts* (2d ed.).

WILLS.**3 SEMESTER HOURS.**

Escheat; descent; statutory rules; wills — kinds, alternatives, advantages and scope of; execution, sound mind, fraud and undue influence; mistake; form; attestation; incorporation by reference; revocation by change in circumstance; by subsequent instrument; by physical act; dependent relative revocation; revival; republication; lapsed, void and adeemed gifts; conflict of laws; construction, probate and administration; jurisdiction; procedure; powers of representative; payment of debts; payments of legacies and distribution; statutory rights and allowances; practice. Costigan's *Cases on Wills* (2d ed.).

Graduate Courses

ADMINISTRATIVE LAW.**2 SEMESTER HOURS.**

This course deals with the powers and duties of public officers and of the organization and procedure of administrative agencies. It includes a consideration of the distinction between legislative, judicial, and executive powers; the conclusiveness of administrative determination; the requirement of due process; and the extent of judicial control over administrative action. This will include: The law of public officers; dealings with governmental units under which these officers work; administrative discretion; notice and hearing as requisites of administrative action; judicial interference with administration; finality of administrative determination; municipal legislation; powers, revenue; property rights; indebtedness; and liability. Stason's *Cases on Administrative Tribunals*.

ADMIRALTY.**1 SEMESTER HOUR.**

This course deals with jurisdiction, general average and marine insurance, bottomry and *respondia*, salvage, maritime torts defined and limited; American and English doctrines on survival of actions for fatal injuries, navigation rules, damages in collision, limited liability act, priorities of maritime and non-maritime liens, pleading and practice, federal and state statutes changing the common law. Lord and Sprague's *Cases on Admiralty*.

APPELLATE PRACTICE AND BRIEFS.**3 SEMESTER HOURS.**

Develops the fundamental principles underlying the procedure commonly employed in the courts of Massachusetts and in the trial and review of causes, both at law and in equity. The problems of appeal are based upon and pre-suppose steps taken, and motions and exceptions made before, during, and after the trial or proceeding in the lowest court. Therefore, the course will embrace as foundations for appeal the topics of venue, jurisdiction, judgments on default and demurrer, and arrest of judgment; continuance, the incidents of a jury trial, such as the right to a jury, its selection, opening statement, conduct of counsel, dismissal, non-suit and directed verdict, instructing the jury, and the verdict; trial by court without a jury, and the judgment.

What is reviewable; methods of review; parties to proceedings for review; preparation of briefs and handling of appeals in the various appellate courts.

CONVEYANCING SEMINAR.**4 SEMESTER HOURS.**

This course will demonstrate the application of theoretical real property law to the practice of conveyancing, or passing upon real estate titles. Actual problems facing the conveyancer will be demonstrated and discussed. The student will be instructed in the preparation and use of the many forms which the conveyancer must utilize in his daily tasks.

Seminar discussions will give actual acquaintance with selected famous titles upon which much Metropolitan realty depends, and with famous cases in the Massachusetts Supreme Court involving real estate problems.

The course will cover the problems of the conveyancer in passing upon titles to real property — pertinent legal principles as to all of the various rights and incumbrances incident to ownership of real property—prescriptive rights, easements, restrictions, adverse possession, covenants, transfers through death with or without administration, mortgages, liens, fraudulent conveyances, equitable servitudes, etc.—land registration procedure, title certificates, preparation of deeds, mortgages, contracts to buy and sell, releases, and other papers.

The course will provide a practical review of the entire field of real property; probate practice as it pertains to real estate, and Land Court practice in Massachusetts.

DAMAGES.**2 SEMESTER HOURS.**

The theory and practice of the measure of relief in court; respective functions of court and jury in estimating damages, exemplary, liquidated, nominal, direct, and consequential; avoidable consequences; certainty, compensation, damages for non-pecuniary injuries; questions of value; interest; expenses; damages in the various types of tort and contract actions, and damages in taking under the right of eminent domain. McCormick's *Cases on Damages*.

INTERNATIONAL LAW.**2 SEMESTER HOURS.**

This course deals with the origin, development, sources and force of international law; acquisition and recognition of international status; neutralized and protected states, recognition of belligerency, international right of existence and independence, intervention, property; jurisdiction over lands, seas, persons, nationals and aliens; diplomatic relations, treaties and international agreements, arbitrations and awards, reprisals, embargo, sanctions and blockade; definition of war, rights and obligations of belligerents, non-hostile relations between belligerents; capture, treatment, exchange and release of prisoners; military occupations and government, armistices, methods of termination of war, rights of neutral states against search of vessels, seizure of contraband and blockade; national and international prize courts. Hudson's *Cases on International Law* (2d ed.).

LEGAL HISTORY AND JURISPRUDENCE.**4 SEMESTER HOURS.***a. Legal History*

The historical development of the common law, and of the courts and institutions through which it functions, will be worked out in a series of horizontal periods. The purpose is practical as well as scholarly; it is to study and evaluate the past so that its materials may be understood for use in the practical legal present and some estimate may be made of the future.

Some familiarity will be acquired with great men, statutes and phrases which are still referred to in legal discussions and decided cases.

For the purpose of comparisons, there will be a brief outline of all the world's legal systems, other than the Anglo-American. Interesting similarities of juristic theories and practices will be pointed out.

b. Jurisprudence

The science of justice is woven into the various periods of legal history, because it is deemed to be an inescapable part thereof. For earlier periods, the broad swings towards and away from stability and flexibility will be the chief matter studied. In more recent times, an outline of the analytical, philosophical and historical schools of jurisprudence will be evolved, with current theories and tendencies. American legal decisions will be used to illustrate recent theories of the science of law wherever possible.

LEGAL RESEARCH FOR PRACTITIONERS.

1 SEMESTER HOUR.

Materials of Research:

Legislative enactments: editions of Federal and State Constitutions, official, unofficial, annotated, unannotated; editions of Federal and State Statutes, official, unofficial, annotated, unannotated; treaties; governmental orders and regulations; municipal charters and ordinances; Rules of Court. Form of legislative acts, slip laws, session laws.

Judicial precedents: editions of Federal Reports, Supreme Court, lower Federal Courts, official, unofficial, annotated, unannotated; State Reports; National Reporter System; annotated reports; special subject reports; decisions of administrative bodies.

Books of index: digests; textbooks; restatements; encyclopedias; annotations; citators; dictionaries; legal periodicals; appeal papers.

Methods of Research:

In Legislative enactments, Federal and State, direct and indirect methods; judicial precedents, Federal and State; the fact index method of approach — analysis of fact elements; topic method of approach; words and phrases method of approach; use of tables. Supplementing and evaluating precedents. Special emphasis will be placed on Massachusetts materials and methods of research in statutory compilations and reports of judicial precedents from 1628 to date. Particular reference will be given to methods of ascertaining the legislative and judicial history of local statutes, whether amended, superseded, repealed, etc., with judicial interpretations thereof. Some attention will be given to English materials and methods of research. The class lectures will be supplemented by actual demonstrations of methods in the school library. Suggestions will be made as to library requirements in the office of the practicing lawyer. Eldean's *How to Find the Law* (Brandt's 2d ed.).

LEGAL SEMINAR.

2 SEMESTER HOURS EACH YEAR.

This course will continue throughout the entire two years. The work will deal with fundamental subjects of the law by means of the presentation of written papers on assigned readings and research, followed by class discussion, formal argument, and the submission of briefs.

During the first year the following topics, among others, will be considered: Patents, copyrights and trade-marks, domestic and foreign; naturalization, nationality, aerial jurisdiction, expatriation, extradition and rendition, neutralization, marine insurance, inevitable accidents, maritime liens; other subjects in International, Admiralty, and Constitutional Law.

During the second year topics dealing with unfair competition, interference with contract, taxation and other pertinent topics will be considered, and a graduate thesis on some legal topic will be prepared and submitted as one of the requirements for the degree.

PUBLIC UTILITIES.

2 SEMESTER HOURS.

Development of the public utility concept; entry into public service; creation of the relation of public utility proprietor and patron; basis and extent of the public utilities' duties—as to service to all; adequate facilities, discrimination, reasonable rates; performance of the service; termination of the relation; withdrawal from service; utilities' right to make regulations; regulation by public through administrative agencies; functioning of such agencies; judicial review

TAXATION.**2 SEMESTER HOURS.**

The purpose of this course is to present taxation as a specialized art or function of the lawyer, rather than as an aspect of constitutional law, conflict of laws, accounting, or economics; to give the student information as to how taxes work and why they fail. To accomplish this aim, the course deals with the legal basis and legitimate purposes of taxation; the so-called general property tax and tax administration, protests to city assessors, and proceedings before the Massachusetts Board of Tax Appeals, estate, inheritance, and gift taxes; the income tax, State and Federal, its constitutional limitations, jurisdiction, the nature of taxable income, and the administration of the tax, modern excise taxes on business concerns, State excise taxes, Federal capital stock and excess profits taxes. Magill and Maguire's *Cases on Taxation*.

REQUIREMENTS FOR DEGREES

Degree of Bachelor of Laws (LL.B.)

To be eligible for the LL.B. degree, a candidate must have met the following requirements:

Age. Students must be twenty-one years of age at the time of receiving the degree.

Period of Study. A student must have been in regular attendance for a period of three years in the day curriculum or four years in the evening curriculum either at Northeastern University School of Law or at an approved law school. In no instance, however, shall a student qualify for his degree with less than one full year of regular attendance at Northeastern University School of Law.

Examinations. A student must have passed satisfactory examinations in at least eighty-two hours of required courses. The students will also be required to pass satisfactorily the work of the Practice Court and the course offered on the preparation of legal forms and papers.

Honors. To qualify for honors a student must have met all of the above requirements and in addition thereto have passed his examinations with distinction in all of the courses required for the LL.B. degree and in at least four hours of additional courses from the field of electives. There are two classes of honors:

Cum Laude. Students who have met all of the requirements for honors and attain an average grade of between eighty-five per cent and ninety-one per cent, both inclusive, will be recommended for the degree, *Cum Laude*.

Magna Cum Laude. Students who attain an average grade of ninety-two per cent or better will be recommended for the degree, *Magna Cum Laude*.

Degree of Master of Laws (LL.M.)

The Purpose of the Master's Course. The course leading to the degree of Master of Laws is intended primarily for those students and attorneys who intend to practice law. The instruction in the course leading to the degree of Master of Laws is designed to encourage students and active practitioners of the law to continue their law study after receiving the degree of Bachelor of Laws, so as to equip themselves for more effective professional work and for greater contribution to the administration of justice as members of the bar, as legislators, or in other forms of public service, and to encourage investigations directed toward a better understanding and improvement of the law, both in its substance and in its application. A high standard of accomplishment will be required in the graduate courses. The marking system embraces these grades: Pass with distinction, Pass, and Fail.

Requirements for the Degree. To be eligible to receive the degree of Master of Laws, a candidate must have qualified for admission to the Master's course in candidacy for the Master's degree, and have passed satisfactorily courses aggregating at least six hours of class work a week for two school years. In addition, the candidate for such degree must engage in seminar and research work under the direction of some member of the faculty and complete and submit a thesis on some subject chosen after consultation with the instructor, under whose direction the research is to be done, and the Committee on Graduate Instruction. He must then pass such oral or written examination covering the material of his thesis as shall be required by the Committee.

GENERAL INFORMATION

Registration

The filing of an application for admission to the School does not constitute registration. All students, including those entering the School for the first time, are required to register and arrange for the payment of their tuition during the registration period. (See calendar, page 4)

Students are urged to register before the opening date whenever it is possible to do so.

Tuition and Fees

Application Fee. The application fee of \$5 must accompany the application for admission and is payable only once on initial entrance to the School. The fee is not refundable.

No application fee will be required of those applicants for admission to the graduate course who are graduates of Northeastern University School of Law and have previously paid an application fee in the School of Law.

Tuition.

Day Undergraduate Students. The fee for tuition will be \$200 a year, payable in four installments of \$50 each.

Evening Undergraduate Students. The fee for tuition will be \$160 a year, payable in four installments of \$40 each.

Tuition for either day or evening students carrying less than a full program shall be at the rate of \$8 for each semester hour.

Graduate Students. The tuition fee will be \$125 a year, payable in four quarterly installments.

The tuition fee for individual courses will be on the basis of \$10.50 for each semester hour.

Incidental Fee. There will be an incidental fee of \$5 charged each year and collected at the time of the initial installment of tuition.

Condition Examination Fee. Students taking an examination for the purpose of removing an incomplete or a condition will be charged an examination fee of \$5.

Graduation Fees. A graduation fee of \$10 will be charged all candidates for the LL.B. or LL.M. degrees, payable on or before May 1 of the year in which they qualify for their degrees.

Attendance and Examinations

Students are expected to attend with regularity the sessions of all courses in which they are enrolled. Students who are irregular in class attendance may be dropped from the class rolls or be refused permission to take the final examinations in the course.

Examinations are held at midyears in all subjects completed at that time, and at the close of the year in all other subjects. Periodic tests and hour examinations are given throughout the school year to enable both the students and the instructors to appraise the effectiveness of their work. Students will be expected to pass satisfactory examinations in all of the required courses of the curriculum. For poor work, as evidenced either by the classroom work or the results of examinations, the student may be warned, required to repeat, or dropped from the School.

Undergraduate Grading System

The work of each student shall be graded upon examinations, according to the following scale:

	A	Superior
	B	Above average
	C	Average
	D	Lowest passing grade
	E	Unsatisfactory*
	F	Failure**
No examination	Inc.	Incomplete

*An unsatisfactory grade may be made up by taking the make-up examination and obtaining a minimum of sixty-five per cent for the course, or by repeating the course in its entirety and obtaining a minimum of sixty-five per cent.

**A failure may be made up, but only by repeating the course in its entirety and obtaining a minimum of sixty-five per cent in the course.

Discipline

Attendance at the University is a privilege and not a right. The Committee on Administration reserves to itself the right to require the withdrawal of any student at any time whom it may deem unworthy either on account of his neglect of study, his incapacity for the law, or for any grave defect of conduct or character, and no reason for requiring such withdrawal need be given.

General Notice

The hours of instruction, casebooks used, subjects taught, degree requirements, and like matters are subject to change at the discretion of the Dean and full-time faculty, but there will be no change in charges for tuition, or any other major change, during the school year for which a student has registered.

SCHOLARSHIPS AND PRIZES

Undergraduate Program

LAW SCHOOL HONOR SCHOLARSHIPS

Northeastern University has created within the School of Law the following scholarships:

1. Three \$75 scholarships to be awarded respectively to the member of the Junior, Sophomore, and Freshman class who receives the highest scholarship average, provided he re-enrolls for the next year. In the event he does not re-enroll, the student having the second highest scholarship average shall be awarded the scholarship.
2. Three \$50 scholarships to be awarded respectively to the member of the Junior, Sophomore, and Freshman class ranking next highest to the student who receives the \$75 award, provided in each instance that the student re-enrolls for the next year. In the event a student does not re-enroll, the next highest ranking student shall receive the award.
3. Twelve \$25 scholarships to be awarded respectively to the four members in each of the Junior, Sophomore, and Freshman classes ranking next in order to the student who receives the \$50 award, provided in each instance that the student re-enrolls for the next year. In the event that a student who qualifies for this award does not re-enroll, the next highest ranking student in his class shall receive the award.

THE KAPPA DELTA KAPPA SCHOLARSHIP

A scholarship gift to be awarded annually to the member of the Sophomore class, who, in the opinion of the administrative officers of the School, has through his personality, character, conduct, service and scholarship made the greatest contribution to the School. This award is to be made only in the event the student returns for his Junior year.

BENJAMIN GINSBERG MEMORIAL SCHOLARSHIP

A fund given by the Upsilon Delta Sigma Fraternity to establish a scholarship in memory of Benjamin Ginsberg of the Class of 1927. The scholarship is to be awarded annually to the highest ranking student of the Sophomore class.

SIGMA TAU EPSILON FUND

A fund of \$100, the income to be used to purchase a prize in the form of a book to be presented to the student whose grades rank the highest in the Freshman year. The student is to be presented with this prize only in the event he re-enrolls for his Sophomore year.

THE GAMMA KAPPA NU SCHOLARSHIP FUND

A fund of \$800, the income to be used as a scholarship gift in the form of the first installment of tuition in the Senior year.

This scholarship gift "shall be presented annually to that woman in the Junior class who has done the most for the School and has also maintained a high scholarship in her studies, and provided that she registers for her Senior year."

PHI PI CHI SCHOLARSHIP

A fund, the income of which is to be used to purchase a prize in the form of a law book, to be presented to the student whose grades rank among the first ten on the Dean's list in the Freshman year.

The Executive Council of the Chapter in conjunction with the Faculty Adviser shall select the student. Presentation is to be made only in the event that the student enrolls for his Sophomore year.

Graduate Program

The University has created nine scholarships of \$25 each to be awarded annually to students enrolled as candidates for the degree of Master of Laws.

First-year as well as second-year students in the Master's Program are eligible for these awards. These scholarships will be granted at the discretion of the Committee on Administration to those students of high scholastic attainment whose need, ability, and fitness to pursue graduate study, merit the award.

LIBRARY

The law school library is well lighted and furnished and easily accessible. It contains more than 10,000 volumes and is steadily growing. The library is so arranged as to give the student direct access to the books in the stacks as well as in the reading room. The library contains many of the State Reports, the complete National Reporter System, the Federal Reports, and reports of the Supreme Court of the United States, the English Reports, English and American Digests, and an extensive collection of encyclopedias, annotations, treatises, legal periodicals, approved textbooks, and all current casebooks.

The library is open weekdays from 9:00 A.M. to 10:00 P.M.; Sundays from 2:00 P.M. to 6:00 P.M.; and holidays from 12:00 M. to 6:00 P.M.

COLLEGES REPRESENTED IN THE SCHOOL OF LAW STUDENT BODY

Amherst College	2	Massachusetts State College	4
Antioch College	1	New York University	3
Assumption College	1	Northeastern University	45
Bates College	3	Northwestern University	1
Boston College	17	Norwich University	1
Boston University	49	Radcliffe College	1
Bowdoin College	7	Rhode Island State College	1
Bridgewater State Normal	1	St. Mary's University	1
Brown University	5	St. Petersburg Junior College	1
Carleton College	1	Simmons College	1
Catholic University of America	1	Smith College	2
Clark University	3	Springfield College	1
Coe College	1	Trinity College	1
Colby College	1	Tufts College	6
College of William and Mary	1	University of Akron	1
College of Wooster	1	University of Alabama	6
Columbia University	2	University of Maine	5
Columbus University	1	University of Munich, Germany	1
Cornell University	1	University of New Hampshire	4
Dartmouth College	7	University of Pennsylvania	2
DePauw University	2	University of Vermont	1
Dunbar Junior College	1	University of Wisconsin	1
Emerson College	1	Upsala College	1
Fordham University	1	Urbana Junior College	1
Franklin and Marshall College	1	Washington and Lee College	1
Georgetown University	2	Wesleyan University	2
Glasgow University, Scotland	1	Western Reserve	1
Harvard University	43	Williams College	2
Holy Cross College	3	Yale University	3
Lowell Teachers College	1		
Lowell Textile Institute	1	Total Students	271
Massachusetts Institute of Technology	7	Colleges Represented	61

DEGREES CONFERRED IN 1937

BACHELOR OF LAWS, CUM LAUDE

Herbert Alpert
John Manning Bashaw
Harold Bernhard Buse
David Francis Erickson

Robert John Flynn
Dorothy Pauline Fox
Harry Edward Johnson
Lloyd Cole Johnson

Edward Francis Mullen
David Russell Ovans
Abraham Robert Winer

BACHELOR OF LAWS

Paul Bernard Abkowitz
Edward Mitchell Altman
Frederick Joseph Bashaw
Martin S. Bennett
Engelbert Joseph Berger
Ernest Osher Berman
Edward Louis Binder
John Joseph Bray, Jr.
Hughes Lyman Brenner
Bernard William Brooks
Anna Ruth Brown
James Everett Campbell
John George Carson
Joan Fraser Chambers
Sylvia S. Cohen
Francis Michael Collins
Murray Maxwell Coran
Harry Corin
Elliott Theron Cowdrey
Joseph Hyman Danis
William Henry Delay
Michael DeMarco
Joseph Philip DiModica
Nicholas Vincent Drago
Abraham Dworkin
Norman Levine Edwards
William Joyce Elkins
Lewis Joseph Fisher
Donald Horace Foisy
Samuel Forman
Dorothy Maxwell Fowler
Harold Fox
Isadore Edward Freedman
Max William Garber

Richard Hutchinson Gay
Allan Earl Gifford
Maurice Glickman
Paul Martin Goddard
Louis David Goldstein
Vinal Garfield Good
Walter John Gotovich
Thomas Edmund Harrington
Timothy William Harrington
Florent Amedee Hebert
Franklin Knibloe Hoyt
Arvid Hilmer Johnson
Mary Elizabeth Kelley
Mary Agnes Kerwin
Morris Kirsner
Francis Leo Lappin
Eugene Meyer Lazarus
Joseph Ausillio Lepore
Sydney Jay Levenson
Eli Maurice Levine
William Butler MacDonald
Saul Malenbaum
Lloyd Howard Matson
Donald Barr McCammond
Robert Benedict McCarthy
Patrick Joseph McDonnell
Herman Carl Miller
Leo Vincent Moran
Edward Brown Morgan
Roland Joseph Morin
Doris Morrison
John Andrew Murphy
Robert Manuel Neirman
Ernest Louis Nigro

Morris Nissenbaum
Estil Edwin Ordway
Kathleen Marie Alexis O'Shea
Thomas Alexander Perkins
Charles Joseph Perry
Benjamin Michael Piecewicz
Ernest Laurence Place
George Lovett Ratzkoff
Francis Xavier Recomendens
Samuel Rial
Mabel Lillian Richards
Stanley George Rittenberg
Thomas Francis Roche
Harold Rogowitz
Hyman Harry Rovner
Benjamin Sandler
Cornelius Thomas Scanlon
Arthur Edward Schoepfer
Pasquale Sciafani
Louis Selden
James Albert Shannon
Max Short
Solomon Shulman
George Alfred Sinder
Allen Fuller Smith
George Swartz
Thomas Christopher Sweeney
John Todd
Edwin Ross Trafton
Talbot Tinkham Tweedy
Herbert Wall
Irving Widetzky
Samuel Yaffe
Anthony Joseph Young

DEGREES AWARDED OUT OF COURSE

Ernest Brenner
Thomas Frederic Brophy
Benjamin Cohen
Harry Chamberlin Davis
Ralph Del Gaudio
Isadore Fried
Joseph Peter Gentile
Samuel Harry Goldman

Bernard Samuel Green
Thomas Bryant Guy
Clifford Bailey Hathorn
Herbert Eugene Hoover
Leo Lapon
Manuel Levine
Charles William Levy
Ermon Louis Markella

Peter Bartholemew Meo
Stephen John Minkus
Maurice Albert Morin
William Joseph Murphy
Timothy Joseph Regan, Jr.
Cornelius Jay Robinson
Kenneth Elijah Whiton

GRADUATE STUDENTS

ANSELMO, VANDA C. West Medford
Northeastern University, LL.B.
BASHAW, FREDERICK J. Providence, R. I.
Northeastern University, LL.B.
BERGER, ENGBERT J. Adams
Northeastern University, LL.B.
BROWN, ANNA R. Brookline
Northeastern University, LL.B.
CAULEY, EDWARD T. Brighton
Suffolk Law School, LL.B.
CAVANAGH, FRANK J. Brighton
Suffolk Law School, LL.B.
Northeastern University, B.B.A.
CORKUM, WILLIAM E. South Weymouth
Northeastern University, LL.B.
CROWE, JOHN F. Roslindale
Northeastern University
FACEY, WALTER L. Lexington
Boston University
Northeastern University, LL.B.

GILMAN, ROBERT A. Brookline
Harvard University, A.B.
Northeastern University, LL.B.
GODDARD, PAUL M. Newton Center
Harvard University, A.B.
Northeastern University, LL.B.
GOODNESS, JOSEPH H. Roslindale
Boston University, B.B.A.
Northeastern University, LL.B.
HOYT, FRANKLIN K. Auburndale
Williams College, B.A.
Northeastern University, LL.B.
HURLEY, JEREMIAH J. Roxbury
Northeastern University, LL.B.
HUTCHINS, FERNALD Brookline
Northeastern University, LL.B.
JACKSON, JULIAN E. Auburndale
Coe College, A.B.
Harvard University, M.B.A.
Northeastern University, LL.B.

JOFTES, SAUL E. <i>Northeastern University, LL.B.</i>	Mattapan	POTTERTON, M. PATRICIA <i>Northeastern University, LL.B.</i>	Brookline
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MARGET, LEON A.	Newton	PENDLETON, JOSEPH W.	Saugus
<i>Harvard University, A.B.</i>		PERALTA, JOSEPH L.	Lynn
MARSHALL, ALEXANDER P.	Wellesley Hills	PEREZ, FRANK	East Boston
MARSHALL, SAMUEL	Newton Center	PETTINELLI, ANTHONY	Boston
MARTENS, RODERIC B.	Arlington	PF AU, GERTRUDE A.	West Roxbury
<i>Harvard University</i>		PIRRI, JOSEPH F.	South Boston
MATTHEWS, LEONARD L.	Dorchester	PITT, ALBERT T.	Newtonville
MAYNARD, ANNETTE C.	Brantree	<i>Boston University, A.B.</i>	
MAYO, HORACE C.	Lewiston, Maine	POWERS, RICHARD J.	Dorchester
MCCAUL, JOSEPH B.	East Boston	PRAGER, ISAAC	Dorchester
MCCORMACK, RICHARD F.	Belmont	PRANSKY, NATHAN J.	Winthrop
<i>Boston University</i>		PROLMAN, HAROLD	Dorchester
MCDADE, GRACE D.	Waban	RAFUSE, JAMES H.	Weston
MCDADE, JOHN H.	Dorchester	RANDLETT, E. PRESCOTT	Winchester
McFARLAND, FRED D.	Boston	<i>Dartmouth College, A.B.</i>	
MCGRATH, ROY J.	Newburyport	RANSOM, JOHN T.	Boston
<i>University of New Hampshire</i>		RAVREBY, EDWARD M.	Brookline
McINERNEY, JOSEPH C.	Lowell	REDMOND, ALBERT M.	Dorchester
McKENNA, HELEN P.	Everett	REED, JAMES M.	West Roxbury
McMAHON, ELISABETH S.	Boston	REILLY, THOMAS J.	Cambridge
<i>Brown University</i>		RESTUCCIA, JOSEPH	Belmont
MEE, WILLIAM H.	Jamaica Plain	RICHARDS, CUTHBERT S., JR.	Boston
MELE, RALPH S.	Watertown	<i>Harvard University</i>	
MILOT, EDGAR H.	Brocton	RICHARDS, ROY A.	Boston
MINASIAN, HYAK J.	Lawrence	RICHARDSON, GEORGE R.	Somerville
MITCHELL, ROBERT S.	Dorchester	<i>Harvard University</i>	
MOGAN, THOMAS F.	Waltham	RIGNEY, CHARLES E.	Nashua, N. H.
MONCUR, JAMES E.	Boston	ROCHE, ELIZABETH A.	Charlestown

ROCHE, RICHARD J.	Harvard	TASSINARI, WILLIAM A.	East Boston
ROGERS, FREDERICK W.	Quincy	THOMAS, RUTH A.	Boston
ROMANO, WILLIAM M.	Watertown	<i>Boston University</i>	
ROME, RUSSELL W.	Cambridge	THOMPSON, GEORGE H.	Weymouth
<i>Wesleyan University, B.A.</i>		TILLOTSON, ELEANOR M.	Mansfield
ROOP, DONALD F.	Franklin	TILTON, WILLIAM F.	Belmont
ROSDAHL, CORNELIUS R.	Malden	TIVNAN, ROBERT E.	Salem
ROSEN, JORDAN A.	Somerville	TOMASELLO, ANTHONY S. J.	Jamaica Plain
ROSENTHAL, BERNARD F.	Boston	<i>Harvard University, A.B.</i>	
ROTH, EDWIN F.	Squantum	TOWNSHEND, BENJAMIN	Beverly
ROURKE, ROBERT C.	Lynnfield Center	TRUE, RICHARD F.	Providence, R. I.
ROWE, WALTER A.	North Attleboro	<i>Dartmouth College</i>	
RUBBINS, BERNARD A.	Roxbury	TUCK, RAYMOND H.	Everett
RUSSELL, WILLIAM F.	Worcester	<i>Boston University</i>	
<i>Clark University, B.A., M.A.</i>		TUTTLE, RICHARD A.	Graniteville
RUTSTEIN, OSCAR E.	Boston	TWOHIG, WILLIAM D.	South Boston
RYAN, JOHN F.	Roxbury	TYLER, EARL C.	Boston
<i>Boston College</i>		<i>Harvard University, A.B.</i>	
SAAD, THOMAS R.	Brockton	VANCE, EARL A.	Dorchester
SABALS, JOSEPH A.	Lowell	VASIL, GEORGE S.	Roslindale
SALMON, JOHN J.	Cambridge	VERSTANDIG, DAVID T.	East Boston
SALON, SHEPARD S.	Mattapan	VIZZARD, GAIL J.	Brookline
SAMMARCO, WEDO A.	Needham	<i>Boston University</i>	
SAROTA, IRVING	Lynn	VOZZELLA, HARRY W.	Franklin
SARVER, PAUL	Lawrence	<i>Boston College</i>	
SAWALLIS, ROBERT F.	Lime Rock, Conn.	WALDEN, GRAHAM D.	Melrose
<i>Clark University</i>		WALKER, GEORGE W.	Newton
SCAFIDI, ANTHONY R.	Boston	WALLACE, ALFONZ	Boston
SCHWARTZ, LEONARD	Cambridge	WALLBANK, HENRY C.	West Roxbury
SEGALINI, ROLAND	Boston	WALSH, ARTHUR J.	Boston
SHADRAWY, JOHN M.	Boston	WALSH, HUBERT J.	Cambridge
SHAPIRO, MELVIN I.	Roxbury	<i>Northeastern University</i>	
SHAUGHNESSY, JOHN J.	Cambridge	WALSH, JOSEPH E.	Cambridge
SHAW, ROBERT D.	Somerville	WALTER, FREDERICK H.	Watertown
SHAW, ROBERT J.	Revere	WATERS, FOSTER B.	Braintree
SHEA, JEROME F.	Randolph	<i>Harvard University, S.B.</i>	
SHEA, JOSEPH J.	Mattapan	WAY, WILLIAM F.	Roslindale
SHEEHAN, PHILIP E.	Weymouth	WEBBER, PAUL B.	Bedford
SHEEHY, BERNARD A.	Andover	WEISMAN, SAUL	Boston
SHERMAN, JOHN E.	Boston	WEKSTEIN, ABRAHAM	Roxbury
SHERMAN, MANUEL	Mattapan	WEKSTEIN, LOUIS	Roxbury
SHERMAN, MITCHELL	Newton Center	WELANS, SIDNEY G.	Revere
SHERWIN, GORDON A.	Atlantic	<i>Tufts College</i>	
SHIELDS, JAMES R.	East Jaffrey, N. H.	WELIN, FRANK B.	Wakefield
SHOLIN, HYMAN	South Boston	WEXLER, WILLIAM H.	Roxbury
SHORT, MEYER	Dorchester	WHALEN, EDWARD T.	Chelsea
SHUMAN, IRVING M.	Dorchester	WHITE, JOHN A., JR.	Providence, R. I.
SIDEMAN, ANNETTE G.	Medford	WHITMORE, WILLIAM D., 3RD	Winthrop
SIDEMAN, HAROLD W.	Lowell	<i>Harvard University</i>	
SMITH, JOHN J.	Newton	WILKINSON, S. FRANCES	Brookline
SMITH, RALPH T.	Charlestown	WILLIAMS, FRANCIS P.	Beverly
SMITH, WARREN E.	Islington	WILSON, EDWARD F.	Derby, Maine
SMITH, WILLIAM L., JR.	West Medford	WINCHESTER, LAURENCE R.	Allston
SNYDER, HERMAN H.	Mattapan	WOLFENDALE, CHARLES W.	Lynn
SPECTOR, HAROLD	Boston	WOLFF, JOHN R.	Milton
STONEBURY, GRANT A., Jr.	Malden	WOLLENHAUPT, JOHN H.	Revere
STOPPER, JOSEPH	Lynn	WOOLWAY, FRANK H.	Newton Center
<i>Northeastern University</i>		<i>Northeastern University</i>	
SULLIVAN, CATHERINE P.	Dorchester	WYMAN, CLARENCE E.	Boston
SULLIVAN, EDWARD F.	South Boston	WYPLER, ALFRED R.	Boston
SULLIVAN, JEREMIAH F.	Nashua, N. H.	<i>University of Wisconsin, B.S.</i>	
<i>St. Mary's University, B.A.</i>		YARROS, DOROTHY M.	Mattapan
SULLIVAN, JOHN J.	Somerville	YOUNG, JULIUS	Brockton
SULLIVAN, JOSEPH D.	Revere	YOUNG, LOUIS H.	Attleboro
SULLIVAN, PHILIP J.	Charlestown	YOUNG, RHODA E.	Medford
SWARTZ, EDWARD	Worcester	ZANG, ERNEST	Cambridge
SWEEDY, HENRY J.	Arlington	ZESERSON, FREDERICK	Roxbury
SYLVESTER, HARLOW S.	Newton Highlands	<i>Boston University</i>	
		ZIEGLER, WILLIAM A.	Dedham

IRREGULAR STUDENTS

ANTHONY, JULIAN D.	Newton Center	BYRAM, JOSEPH G.	Reading
<i>Wesleyan University, B.S.</i>		<i>Dartmouth College, A.B.</i>	
BESSEY, ADRIAN E.	West Newton	COLBY, ROBERT L.	Concord, N. H.
<i>Tufts College, B.S.</i>		CORNELL, CHARLES H.	Needham
BROWNE, THEODORE C.	Winchester	<i>Northeastern University, B.C.S., M.C.S.</i>	
<i>Harvard University, B.S.</i>		<i>Boston University, M.B.A.</i>	
BUCHANAN, MARTIN L.	Franklin	HARRINGTON, PATRICK H.	Boston
BUNKER, FREDERICK W.	West Roxbury		

HINGSTON, CHARLES E. <i>Tufts College, B.S.</i>	Lynn	ROSENGARD, LESTER S. <i>Harvard University</i>	Haverhill
HOLBROOK, ELLIOTT	Saugus	<i>Boston University Law School, LL.B.</i>	
HOLLAND, WALTER H.	Quincy	SHAPIRO, JOSEPH	Roxbury
LAVELLE, CHARLES A. <i>Boston University, B.B.A.</i>	Dorchester	SMITH, EDNA B.	Brookline
LEARNER, NATHAN <i>Harvard University</i>	Roxbury	STEVENSON, J. KENNETH <i>Northeastern University, B.C.S.</i>	Belmont
LYONS, FRANCIS P. <i>Boston College</i>	Dorchester	STEWART, JAMES M. <i>Northeastern University</i>	Wellesley
MAZER, SYDNEY	Chelsea	TOENSMEIER, CARL M. <i>College of Wooster, A.B.</i>	Wollaston
MCCORMACK, MARSHALL H.	Malden	TUCK, FRANCES L.	Dorchester
		WHITTUM, GEORGE H. <i>Northeastern University, B.S. in B.A.</i>	North Quincy

REGISTERED FROM OTHER DEPARTMENTS OF THE UNIVERSITY

BONZAGNI, AUGUSTINE J.	Melrose	JACKSON, IRENE C.	Boston
DOYLE, FRANK J.	South Boston	KESSEL, ABRAHAM	Revere
EBLING, WILLIAM H.	Wakefield	RAMEY, BERNARD F.	Roslindale
FAIRBURN, ROBERT S.	Cambridge	SMITH, CHESTER M. <i>Northeastern University, B.S.</i>	Melrose
GREGERMAN, EDWARD B.	Dorchester	SOLLOWS, CLIFFORD F., JR.	West Medford
HAYES, EDWARD J.	Lynn	STARBIRD, SUMNER G.	Watertown
HOLMES, HAROLD C.	Roslindale		
HULBERT, L. WILLIS	Arlington		

STATISTICAL SUMMARY OF STUDENTS

Graduate Students	35
Class of 1938	176
Class of 1939	168
Class of 1940	242
Class of 1941	508
Irregular Students	25
Registered from other departments of the University	14
	<hr/>
	1,168

NORTHEASTERN UNIVERSITY

College of Liberal Arts

Offers a broad program of college subjects serving as a foundation for the understanding of modern culture, social relations, and technical achievement. Varied opportunities available for vocational specialization. Degree: Bachelor of Science or Bachelor of Arts.

College of Engineering

Offers curricula in Civil, Mechanical (with Diesel, Air-Conditioning, and Aeronautical options), Electrical, Chemical, Industrial Engineering, and Engineering Administration. Class room study is supplemented by experiment and research in well-equipped laboratories. Degree: Bachelor of Science in the professional field of specialization.

College of Business Administration

Offers three curricula: Accounting, Banking and Finance, and Business Management. Each curriculum represents in itself a broad survey of business technique, differing from the others chiefly in emphasis. Degree: Bachelor of Science in Business Administration.

School of Law

Offers day and evening undergraduate programs admitting those who present a minimum of two years of college work, each program leading to the degree of Bachelor of Laws. Also graduate program in the evening leading to the degree of Master of Laws. Co-educational.

School of Business

Offers curricula through evening classes in Accounting, Management, Law and Business, and Engineering and Business leading to the degree of Bachelor of Business Administration in specified fields. Preparation for C. P. A. Examinations. Shorter programs may be arranged. Co-educational.

Pre-Legal Program

Offers in connection with the College of Liberal Arts special day and evening programs providing the equivalent of two years of college work and preparing for admission to the undergraduate programs of the School of Law. Co-educational in the evening.

The Colleges of Liberal Arts, Engineering and Business Administration offer day programs for men only and are conducted on the co-operative plan. After the freshman year students may alternate their periods of study with periods of work in the employ of business or industrial concerns at ten-week intervals. Under this plan they gain valuable experience and earn a large part of their college expenses.

In addition to the above schools the University has affiliated with it and conducts: the Huntington Day School for Boys, which prepares for admission to all leading colleges and universities; the Lincoln Technical Institute offering, through evening classes, courses of junior college grade in various fields of engineering; and the Lincoln Preparatory School, an evening school preparing for college entrance and offering other standard high school programs.

For further information regarding any of the above schools, address

NORTHEASTERN UNIVERSITY

360 Huntington Avenue, Boston, Massachusetts

Telephone: KENmore 5800



NORTHEASTERN UNIVERSITY

YEAR

BOSTON

1938-1939

SCHOOL OF BUSINESS

EVENING SESSIONS

OFFICE HOURS

To JUNE 20, 1938

Daily (*except Saturdays and Sundays*), 8.45 A.M.—9.30 P.M.

Saturdays, 8.45 A.M.—1.00 P.M.

JUNE 21, 1938 — AUGUST 15, 1938

Daily (*except Saturdays and Sundays*), 9.00 A.M.—4.00 P.M.

Saturdays, 9.00 A.M.—12.00 NOON.

AUGUST 16, 1938 — JUNE 19, 1939

Daily (*except Saturdays and Sundays*), 8.45 A.M.—9.30 P.M.

Saturdays, 8.45 A.M.—12.00 NOON through September 3.

8.45 A.M.— 4.00 P.M. September 10, 17, and 24.

8.45 A.M.— 1.00 P.M. October 1—June 19.

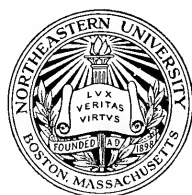
Address Communications to

NORTHEASTERN UNIVERSITY
SCHOOL OF BUSINESS

312 HUNTINGTON AVENUE, BOSTON, MASS.

TELEPHONE: KENMORE 5800

NORTHEASTERN UNIVERSITY
EVENING DIVISION
SCHOOL OF BUSINESS



31st Year
1938-1939

*A DISTINCTIVE SCHOOL OF BUSINESS
providing opportunities for men and women to receive advanced
training in Business during convenient Evening Hours*

Table of Contents

	<i>Page</i>
Northeastern University, General Statement	
Administrative Organization	iii, iv
Statistical Summary	1
Plan of Education	3-4
Location	5
School of Business	
Calendar of Evening Sessions	2
Administrative Organization	6
The Background of an Institution	
PURPOSE, POLICY, METHODS OF INSTRUCTION	7-8
VOCATIONAL GUIDANCE	8-9
SUCCESS OF ALUMNI	9-10
PLACEMENT SERVICE	11-12
Staff of Instruction	13-17
Programs of Instruction	
ACCOUNTING	19-21
MANAGEMENT	22-24
LAW AND BUSINESS	25-26
ENGINEERING AND BUSINESS	27
SPECIAL AND SINGLE	27
Description of Courses	
ACCOUNTING	28-30
DISTRIBUTION	30-31
ENGLISH	32-33
ECONOMICS	33-34
LAW	34-35
MANAGEMENT	35-36
General Information	
CLASSROOMS, TEXTBOOKS, RECREATION	38
STUDENT COUNCIL	38
SCHOLARSHIPS AND AWARDS	39-40
Administrative Policies	
ADMISSION REQUIREMENTS	41-42
REGISTRATION	43
ATTENDANCE	43-44
EXAMINATIONS	44
MARKS AND CREDITS	45
Tuition and Other Fees	47-48
Withdrawals and Refunds	48
Degrees and Theses	49-50
Register of Students	50-60

Northeastern University

Administrative Organization

THE NORTHEASTERN UNIVERSITY CORPORATION

ROBERT GRAY DODGE

Chairman

FRANK LINCOLN RICHARDSON

Vice-Chairman

FRANK PALMER SPEARE

President of the University

CHARLES FRANCIS ADAMS

WILMAN EDWARD ADAMS,

ROGER AMORY

EARL D. BABST

ROBERT BALDWIN

ARTHUR ATWOOD BALLANTINE

GEORGE LOUIS BARNES

THOMAS PRINCE BEAL

FARWELL GREGG BEMIS

PAUL CODMAN CABOT

FRANK PIERCE CARPENTER

WALTER CHANNING

WILLIAM CONVERSE CHICK

EVERETT AVERY CHURCHILL

PAUL FOSTER CLARK

SEARS B. CONDIT

ALBERT MORTON CREIGHTON

WILLIAM JAMES DAVIDSON

JAMES DEAN

HENRY STURGIS DENNISON

PAUL AUGUSTUS DRAPER

CHARLES FRANCIS EATON

CARL STEPHENS ELL

JOSEPH BUELL ELY

TIMOTHY JAMES FAIVEY

FREDERIC HAROLD FAY

ALLAN FORBES

EDWARD J. FROST

FRANKLIN WILE GANSE

GEORGE PEABODY GARDNER, JR.

HARVEY DOW GIBSON

MERRILL GRISWOLD

HENRY INGRAHAM HARRIMAN

CHANDLER HOVEY

HOWARD MUNSON HUBBARD

ARTHUR STODDARD JOHNSON

HENRY CAMPBELL JONES, JR.

HALFDAN LEE

EDWARD ABBOTT MACMASTER

JOHN RUSSELL MACOMBER

JOSEPH PATRICK MANNING

HAROLD FRANCIS MASON

HUGH DEAN McLELLAN

IRVING EDWIN MOULTROP

CLARENCE LUCIAN NEWTON

OLAF OLSEN

ANDREW JAMES PETERS

GEORGE EDWIN PIERCE

ROGER PIERCE

MATTHEW POROSKY

FREDERICK SANFORD PRATT

HARRY WENDELL PROUT

SIDNEY RABINOVITZ

JAMES LORIN RICHARDS

CHARLES MILTON ROGERSON

ROBERT BILLINGS RUGG

LEVERETT SALTONSTALL

SABIN POND SANGER

RUSSELL HENRY STAFFORD

FRANCIS ROBERT CARNEGIE STEELE

CHARLES STETSON

ROBERT TREAT PAINE STORER

FRANK HORACE STUART

EDWARD WATSON SUPPLE

JOHN EDWIN TOULMIN

BAYARD TUCKERMAN, JR.

ELIOT WADSWORTH

EDWIN SIBLEY WEBSTER

GALEN DAVID LIGHT

Secretary and Treasurer

THE EXECUTIVE COUNCIL

FRANK PALMER SPEARE, M.H., LL.D.

President of the University

GALEN DAVID LIGHT, A.B.

Secretary and Treasurer of the University

CARL STEPHENS ELL, A.B., M.S., ED.M., Sc.D.

Vice-President of the University

EVERETT AVERY CHURCHILL, A.B., ED.D.

Vice-President of the University

DIVISIONAL COMMITTEES**WORCESTER DIVISION***Governing Board*ROBERT WARING STODDARD, *Chairman*

FREDERICK EUGENE BARTH
ZELOTES WOOD COOMBS
JAMES CHERRY FAUSNAUGHT
HAROLD LUTHER FENNER
ROBERT DUDLEY HARRINGTON

ERNEST LEROY HUNT
VERNON AUGUSTUS JONES
ROBERT LINDO MOORE
ALFRED ERNEST RANKIN
JOHN RICHARDSON

SPRINGFIELD DIVISION*Board of Governors*HORACE JACOBS RICE, *Chairman*

JOHN DOANE CHURCHILL
ROBERT RICHARDSON EMERSON
BENJAMIN ALVEY FRANKLIN

BLAKE ALEXANDER HOOVER
STANLEY OSCAR SMITH
FREDERICK BENONI SWEET

PROVIDENCE DIVISION*Educational Committee*ERNEST IRONS KILCUP, *Chairman*

RICHARD DAY ALLEN
JOHN EDWARD CANDELET
CARL WILLIAM CHRISTIANSEN
DONALD GRAHAM CLARK
WILLIAM COVELL ELLIS

LUTHER NEWTON HAYES
PAUL REVERE LADD
NORMAN HASKELL MAYO
CHESTER TOTTEM MOREY
WILLIAM WASHBURN MOSS
GREN OREN PIERREL

CLARENCE EDGAR SHERMAN

The NORTHEASTERN UNIVERSITY SYSTEM

Statistical Summary — 1936-1937

	<i>Administrative Officers and Faculties</i>	<i>Students</i>
I. General Administration	8	
II. Northeastern University		
College of Liberal Arts	71	1,757
College of Engineering		
College of Business Administration		
School of Law	52*	1,554*
School of Business	91*	1,277*
III. Schools affiliated with and conducted by Northeastern University		
Lincoln Schools	49	965
Huntington Day School for Boys		
Regular Term	17	188
Summer Term	9	111
	<hr/>	<hr/>
Total	297	5,852
Less Duplicates	35	381
	<hr/>	<hr/>
Net Total	262	5,471

* These figures include the administrative officers, faculties, and students of the Divisions of the University in Worcester, Springfield, and Providence.

School of Business

Calendar of Evening Sessions

Class sessions which fall on holidays are made up at the end of the course or as announced.

1938

<i>September</i>	1-9	Examinations for Removal of Conditions and Advanced Standing.
<i>September</i>	12-16	Upper classes begin in Boston and the Divisions.
<i>September</i>	19-23	Freshman classes begin in Boston and the Divisions.
<i>October</i>	12	Legal holiday (no classes in Massachusetts).
<i>November</i>	11	Legal holiday (no classes).
<i>November</i>	24	Legal holiday (no classes).
<i>December</i>	16	Last class session before Christmas recess in Providence.
<i>December</i>	21	Last class session before Christmas recess in Boston, Worcester and Springfield.

1939

<i>January</i>	4	First class session after Christmas recess in Boston and the Divisions.
<i>January</i>	23-27	Second semester classes begin in Boston, Worcester and Providence.
<i>February</i>	22	Legal holiday (no classes).
<i>March</i>	15	Last date for the submission of theses.
<i>April</i>	19	Legal holiday (no classes in Massachusetts).
<i>May</i>	1	Last date for filing application for Degrees and for the payment of the graduation fee.
<i>May</i>	1-26	Final examination period.
<i>May</i>	30	Legal holiday (no classes).
<i>June</i>	4	Baccalaureate Services at Springfield.
<i>June</i>	7	Commencement Exercises at Springfield.
<i>June</i>	11	Baccalaureate Services at Worcester and Providence.
<i>June</i>	14	Commencement Exercises at Worcester.
<i>June</i>	16	Commencement Exercises at Providence.
<i>June</i>	18	Baccalaureate Services at Boston.
<i>June</i>	19	Commencement Exercises at Boston.

Northeastern University

Plan of Education

NORTHEASTERN UNIVERSITY from the outset has been developed around the simple yet practical purpose of meeting human needs in distinctive and serviceable ways, maintaining flexibility in program and organization in order that constant adjustment could be made to changing needs. The faculties of the University have been selected because of their understanding and appreciation of student problems and needs and their ability to teach and to guide students effectively.

Pursuant to this purpose, the University has evolved a definite plan of education which embraces Co-operative Education by day and Adult Education by night. So far as the New England States are concerned, Northeastern University is the only institution whose day colleges are conducted under the Co-operative Plan. The several schools and programs of the University are operated either under the name "Northeastern University" or by its affiliated schools, the Lincoln Schools, and The Huntington Day School for Boys. The following is a brief outline of the principal types of educational opportunity offered.

1 In the field of Co-operative Education there are three day colleges — the College of Liberal Arts, the College of Engineering, and the College of Business Administration. All of these colleges have five-year curricula. The College of Liberal Arts offers majors in the usual fields of the arts and the sciences leading to the degrees of Bachelor of Arts and

Bachelor of Science. The College of Engineering, one of the largest co-operative engineering colleges in the United States, has curricula in Civil, Mechanical, Electrical, Chemical, and Industrial Engineering. The College of Business Administration has curricula in Accounting, Banking and Finance, and Business Management. The College of Engineering and the College of Business Administration confer the degree of Bachelor of Science with specification indicating the field of specialization. The Co-operative Plan under which these day colleges operate enables the student to alternate regular periods of classroom instruction with supervised employment in an industrial or commercial position, thus combining theory and practice in an exceedingly effective manner. Apart from the educational advantages of the Co-operative Plan is the opportunity for self-support while the student is pursuing his studies at Northeastern University. During the co-operative periods, students not only gain experience but are also paid for their services. Approximately three hundred business and industrial concerns co-operate with Northeastern University in making this program effective.

2 The Adult Education Program of the University has been developed in two professional schools, whose classes meet in the evening. The School of Law offers two programs—an undergraduate pro-

gram which prepares for admission to the bar and for the practice of the law and leads to the degree of Bachelor of Laws, and a graduate program for those who have graduated from approved law schools, leading to the degree of Master of Laws. A pre-legal program is also available offering the equivalent of two years of college work and preparing for admission to the School of Law. The School of Business has curricula in Management, Accounting, Law and Business, and Engineering and Business. This school awards the Bachelor of Business Administration degree with specification.

- 3 In order that larger groups of men and women might be served through its evening schools, Northeastern University operates divisions of the School of Law and the School of Business in co-operation with the Young Men's Christian Associations in Worcester and Springfield and of the School of Business in co-operation with the Providence Young Men's Christian Association. With the establishment of the divisions, thoroughgoing methods of supervision were instituted and have been consistently followed and improved, with the result that the divisional work is conducted upon a highly efficient basis.

- 4 The Adult Education Program has also been developed through the Lincoln Schools, which are affiliated with and conducted by Northeastern University. The classes in these schools are held at convenient evening hours. The Lincoln Technical Institute offers curricula upon a junior college level in various phases

of engineering; whereas the Lincoln Preparatory School, accredited by the New England College Entrance Certificate Board, prepares students for admission to college and offers other standard high school programs.

- 5 The Huntington Day School for Boys, also affiliated with and conducted by Northeastern University, is the outgrowth of a demand in the city of Boston for an urban preparatory school with high educational standards, which would furnish thorough preparation for admission to the leading colleges and universities. While easily accessible to the various sections of Boston and to the suburbs, it has the facilities of a country day school and offers a country day school program. This School is one of the leading preparatory schools of the country.

ORGANIZATION

Northeastern University is incorporated as a philanthropic institution under the General Laws of Massachusetts. Furthermore, the State Legislature, by special enactment, has given the University general degree granting powers.

The Corporation of Northeastern University consists of men who occupy responsible positions in business and the professions. This Corporation elects from its membership a Board of Trustees in whom the control of the institution is vested. The Board of Trustees has four standing committees: (a) an Executive Committee which serves as an Ad Interim Committee between the regular meetings of the Board of Trustees and has general supervision of the financial

and educational policies of the University; (b) a Committee on Housing which has general supervision over the buildings and equipment of the University; (c) a Committee on Funds and Investments which has the responsibility of administering the funds of the University; (d) a Development Committee which is concerned with fur-

thering the development plans of the University.

The Board of Trustees has also created through its by-laws, an Executive Council, consisting of the President, the Secretary, and the two Vice-Presidents. To the Executive Council the Board has allocated broad powers.

LOCATION OF THE UNIVERSITY

BOSTON

Northeastern University is located in the Back Bay educational center of Boston within sight of the Opera House, Symphony Hall, the Art Museum, Conservatory of Music, and other cultural and educational institutions. The offices of the University are at 312 and 316 Huntington Avenue, easily reached from the North and South Stations and from the various central points of the Boston Elevated system.

WORCESTER DIVISION

The Worcester Division is located in the Worcester Y.M.C.A. Building at 766 Main Street, and in the new Educational Building facing on Murray Avenue, a five-minute walk south from the City Hall.

The School is easily accessible from all parts of the city and is within easy walking distance of both the Union Station and the bus and interurban terminals. Excellent bus service is maintained to all suburban points. Student rates may be obtained on practically all of these lines.

SPRINGFIELD DIVISION

Northeastern University, Springfield Division, is located two streets east of Main on Chestnut, corner of Hillman—a three-minute walk from Main via Hillman. It is reached from the Union Station by a five-minute walk south along Dwight to Hillman to Chestnut; and a three-minute walk north along Chestnut from the Public Library on State Street.

PROVIDENCE DIVISION

The Providence Division is located in the Y. M. C. A. Building at 160 Broad Street. This location is about an eight-minute walk from the center of the city. Adequate parking facilities are available for automobiles. The following car and bus lines pass the building: Broad Street, Elmwood Avenue, Reservoir Avenue, Pontiac Avenue, Auburn and Eden Park, and East Greenwich.

School of Business

Administrative Organization

GENERAL OFFICERS OF ADMINISTRATION

FRANK PALMER SPEARE, M.H., LL.D., *President of the University*
GALEN DAVID LIGHT, A.B., *Secretary and Treasurer of the University*
EVERETT AVERY CHURCHILL, A.B., Ed.D., *Vice-President of the University*
RUSSELL WHITNEY, B.S., LL.B., *Dean*

LOCAL OFFICERS OF ADMINISTRATION

BOSTON

RUSSELL WHITNEY, B.S., LL.B., *Dean*
EBEN OSWELL SMITH, B.S., *Registrar*
KENNETH STEVENSON, B.C.S., *Bursar*
MYRA EDNA WHITE, *Librarian*
MARY B. FOOR, *Manager of the Bookstore*

PROVIDENCE DIVISION

LUTHER NEWTON HAYES, B.S., M.A., *Director*
CARL WILLIAM CHRISTIANSEN, B.C.S., C.P.A.,
Associate Dean
JOHN EDWARD CANDELET, B.S., A.M., M.B.A.,
Counselor

SECRETARIAL AND OFFICE STAFF

BOSTON

DORIS CLARK TOWNE, *Secretary to the Dean and
in Charge of Placement*
HELEN MARGARET STODDARD, *Recorder*
ELIZABETH BRECHEN HUNT, *Secretary to the
Registrar*
ELIN VICTORIA PETERSON, *Secretary to the Vice-
President*
GRACE HEWETT WATKINS, B.S., *Assistant
Librarian*
ESTHER WORT HUGHES, A.B., *Assistant Librarian*
MABEL ELLEN BEAN, *Secretary to the Bursar*
FLORENCE ELSIE BURTON, *Secretary to the
Treasurer*
THELMA GERTRUDE DUNN, *Bookkeeper, Treas-
urer's Office*
DAISY MILNE EVERETT, *Bookkeeper, Treasurer's
Office*
HELEN LOUISE KOLDERUP, *Cashier*

WORCESTER DIVISION

WILLIAM ALBERT LOTZ, A.B., M.A., *Director*
CHARLES EDWIN HUTCHINS, LL.B., *Counselor to
Students*

SPRINGFIELD DIVISION

JOHN DOANE CHURCHILL, A.M., *Director*
ROBERT RICHARDSON EMERSON, B.C.S., *Treas-
urer*
RALPH LORENZO BOWEN, B.C.S., B.S. in Ed.,
Associate Director and Bursar
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Director*
GUY DOLPHUS MILLER, A.B., Ed.M., C.P.A.,
Associate Dean

WORCESTER DIVISION

IRMA McALLISTER BROWN, *Secretary to the
Director*
LOUISE NEWHALL LEARNED, B.A., *Registrar*
HELEN ELISSA LINDSTROM, *Bookkeeper*

SPRINGFIELD DIVISION

CAROLINE EDITH BERGMANN, B.C.S., *Registrar*
VIOLET LILLIAN DESILETS, *Secretary to the
Director and Recorder*

PROVIDENCE DIVISION

AVIS STOKES MACINTOSH, *Secretary to the
Director and Registrar*

ADMINISTRATIVE COMMITTEE

	EVERETT AVERY CHURCHILL, <i>Chairman</i>	
GALEN DAVID LIGHT	LUTHER NEWTON HAYES	JAMES WALLACE LEES
RUSSELL WHITNEY	EBEN OSWELL SMITH	SYDNEY KENNETH SKOLFIELD
JOHN DOANE CHURCHILL	WILLIAM ALBERT LOTZ	ELIN VICTORIA PETERSON, <i>Secretary</i>

COLLEGIATE SCHOOLS COMMITTEE

	EVERETT AVERY CHURCHILL, <i>Chairman</i>	
JAMES WALLACE LEES	SYDNEY KENNETH SKOLFIELD	EBEN OSWELL SMITH
	RUSSELL WHITNEY	

School of Business

The Background of an Institution

THIRTY-ONE YEARS ago, in March of 1907, the first undergraduate evening school of business in New England was organized. This was the beginning of Northeastern University School of Business, a pioneer endeavor to bridge an existing gap in business and professional education. Four years later, the School was authorized by the Massachusetts Legislature to grant university degrees to its graduates.

PURPOSE

Now, just as at the start, the school seeks first to determine what business needs in its personnel, and then to supply properly trained men and women who can fulfill those needs.

The training of a student at Northeastern has always been conducted so that a graduate receives not only a B.B.A. degree, but an immediately applicable vocational training equipping him to fill a better position in some one business activity. For his future, he has the advantage of a thorough background of business methods and an appreciation of the problems of management, which, if properly used, may lead to advancement and executive responsibilities.

Such a well-rounded preparation also enables a Northeastern graduate to achieve the higher social standing enjoyed by college and university graduates.

ADMINISTRATIVE POLICY

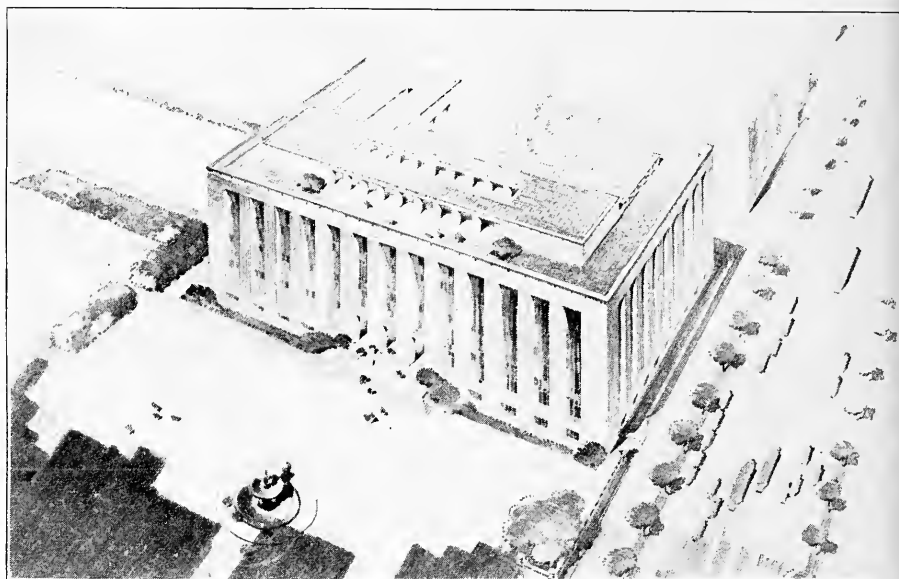
The School of Business was founded to serve those who have only evening hours free for study—a special field, limited to the education of the person who has permanently left day school and gone to work.

The Northeastern University student is an adult, usually more mature than the student of a day school. He is in direct touch with business and is expected to take an active part in his own supervised training. The constant effort of the administrative and teaching staff is toward more effective means of suiting their educational service to the individual evening student.

A program carefully adapted to the needs of the student, and the proper guidance of his time and effort in class group and study, call for high standards in administration. The administrative officers of Northeastern University function solely to help the student get the most value from his course of training. The Dean of the School, the Educational Directors in the Divisions at Worcester, Springfield, and Providence, the Registrars and other officers are available at all times to assist students. Those who desire any sort of advice or guidance in any part of their school work will find the officers of the School always ready to do their utmost.

METHODS OF INSTRUCTION

Because the evening student is daily in contact with business, his training logically should be in actual business problems. The School's instruction in nearly all courses is by the problem method. In a few introductory or survey courses the lecture and text book method is used in combination with the problem method. Most of the teaching staff are active business men whose practical experiences adequately fit them to carry through this type of instruction. Under such a method there is a more de-



Many of the School of Business classes will meet in this new University building which will be ready for occupancy in September

finite individual gain, for the theories of business are faced, so to speak, in their work clothes, and the student's vivid knowledge of economic principles is accompanied by the rise of a keener analytical interest in his business surroundings.

Business demands more than knowledge; it demands quick applications of that knowledge. A Northeastern graduate learns to think and act more independently and soundly when that demand is made of him.

Cases and tests are frequently supplemented by stimulating lectures and class group discussions. Written reports and examinations serve only that the student may measure his own progress or as indications to the instructor of his success in helping the student to a fuller understanding of his subject.

SPECIAL VOCATIONAL GUIDANCE

Northeastern University School of Business does not end its educational responsibilities in merely providing courses of study. Its individual students are helped to determine their own abilities and the field of work in which those abilities will give them the greatest chance of advancement. When a student's interest has been established the school then assists the student in fulfilling the requirements for success in his chosen field.

A student's personal guidance in this respect is not judged as completed in his first year. Rather it is a constant process continually modified to meet the changing conditions of business life during his entire term. The administration and faculty have in the last two years worked out and pu

into effect new plans in a broader effort to—

- 1 Acquaint students with various fields of business activity so that they may make more rational choices of a vocational field in which to specialize.
- 2 Aid students in the choice of specific vocational objectives within their chosen fields.
- 3 Provide facilities for study of vocational and specific job requirements, as well as the opportunities and the steps necessary to achieve progress.
- 4 Co-ordinate the student's education more closely to his vocational interests.

STAFF OF INSTRUCTION

The teaching staff of the School in Boston and the Divisions is recruited from business and professional leaders of New England business. The instructors are college-trained men who have proved their ability in their various fields of specialization. They are selected on the basis of their ability to convey knowledge to others in an interesting, inspiring, and effective manner. They are also chosen for the breadth of their training and experience. Their teaching is a work of enthusiasm freshened each evening by contact with those who are seeking seriously for knowledge, skill, and attitudes that will contribute to success.

While business essentials are stressed, cultural and ethical values are by no means neglected. The ability to think and judge independently usually results in cultural development. But the school has not been content to let the cultural side of its educational activities be merely a passive by-product. Instructors are men of high ideals and attainments, who have a genuine

interest in those finer attributes of character and personality which make for good citizenship and the appreciation of worthy ideals. A large part of the success of the School and of the individual students may be traced directly to the contacts with instructors of the caliber selected by the School of Business.

SUCCESS OF THE ALUMNI

The best indication of the cumulative rewards to be won by pursuing a systematic program of study in spare evening hours is to be found in the records of Northeastern School of Business Alumni.

A recent study covering a 20-year period conclusively shows that better positions and increased incomes are directly traceable to the evening hours spent in preparation at Northeastern.

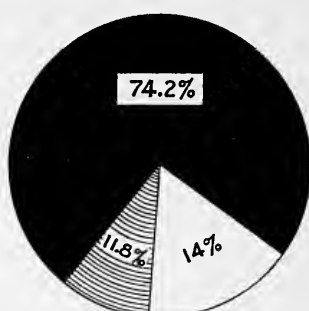
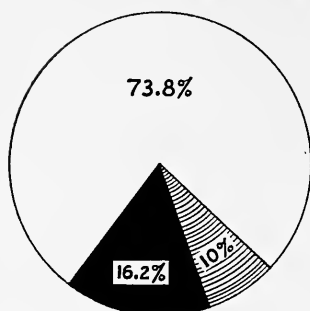
A portion of this study is the comparison of positions held by the alumni when they entered the School as freshmen with the positions they held in January, 1931.

*Upon January
Entrance 1931*

	%	%
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Presidents and Other Corpora-		
tion Officers	.5	3.4
Owners of Business	1.6	6.7
Treasurers and Comptrollers	.2	10.0
Accountants	9.0	31.2
Office Managers	1.2	8.3
Department Managers	3.7	14.6
Salesmen	3.0	4.7
Educators	2.3	4.3
Government Employees	1.9	2.4
Bookkeepers	20.8	5.8
Clerks	47.4	6.2
Factory Workers	4.9	1.0
Unemployed	.7	1.0
Miscellaneous	2.8	.4

THE STUDY OF POSITIONS HELD



KEY



EXECUTIVE RESPONSIBILITY



MISCELLANEOUS POSITIONS



CLERICAL AND FACTORY WORK

*The Freshman Clerk, an Alumnus Executive*

This pronounced trend to better and more responsible positions is further substantiated by a study of the income of the same alumni group over the same period.

Entrance to 1 year after graduation
— 56% increase

Entrance to 5 years after graduation
— 153% increase

Entrance to 10 years after graduation
— 239% increase

Entrance to 15 years after graduation
— 297% increase

Notice that the average Northeastern student begins his advancement in business even while he is *still at his training*, and that upon graduation he has already taken a forward step in his business career.

Although the years since the date of this 20-year normal study have affected the range of its figures, it is safe to assume that a similar ratio between the incomes of

Northeastern trained men and untrained men still applies. In the depression period it is probable that Northeastern alumni, because of their training, have fared proportionately better than in normal times, since business men tend to retain the best of their personnel when reductions become necessary.

However, the success of alumni is not to be measured entirely by the dollar and cents increase in their incomes. Northeastern University School of Business Alumni, as a result of their broad training, have enlarged their whole horizon of life. They have developed a keener appreciation of the human values which count most in life. They have found valuable avenues of friendship and social contact. They have discovered larger opportunities for participation in social and civic enterprises. They have become not only better business men but better citizens.

THE STUDENT BODY

The character of a student body determines the standards which a school can maintain. Nothing is more essential to the success of an educational institution than a careful selection of incoming students. This principle applies just as readily to an evening school as to a day school. Standards are invariably adjusted to the average intelligence of the students. For this reason, Northeastern University School of Business maintains standards of admission which result in a student body capable of pursuing work of standard college grade during evening hours.

The student body consists of 1477 men and women of widely varied ages and occupations. The youngest student is 17 years of age and the oldest 59 years. The average age is 23.9 years.

About one-sixth of the students are married men who have realized that if they are to increase their earning power they must fit themselves for advancement. That the training offered by the School has enabled the students to improve their earning capacities and enlarge their responsibilities is conclusively proved by a study made in 1930-31 which shows that students in the School increased their incomes 49% in the five-year period between entering the School and graduation, and as much as 297% in the following fifteen years.

In the student body 309 high schools and other preparatory schools are represented. Sixty-five colleges and universities are represented by 239 students who are either graduates or have attended one or more years.

In Boston, 503 students come from 113 different cities and towns, commuting from considerable distances.

In the Worcester Division, 287 students represent 35 separate communities; and in Springfield, 36 different communities, largely in the Southern Connecticut Valley, contribute 443 students.

The 250 students at Providence represent 42 cities of Massachusetts and Connecticut as well as Rhode Island.

PLACEMENT SERVICE FOR GRADUATES

While the School cannot guarantee positions to its graduates, the number of requests for men usually exceeds the number available in the graduating class of any given year. The policy of the School is to find the best equipped and qualified men among its graduates for the positions which the School is called upon to fill.

The School in recommending a graduate for a position furnishes the prospective employer with the facts as to the graduate's ability, character, attitudes, habits, and other qualifications for the position as revealed by the School records. In the last analysis, however, placement in a position depends quite largely upon the graduate's ability to sell his services to the prospective employer. Most employers prefer to consider two or more candidates for a position and generally request the School to suggest more than one person. Many manufacturing and commercial firms throughout New England call upon this School to assist them in filling important executive and managerial positions.

No charge is made for placement service.

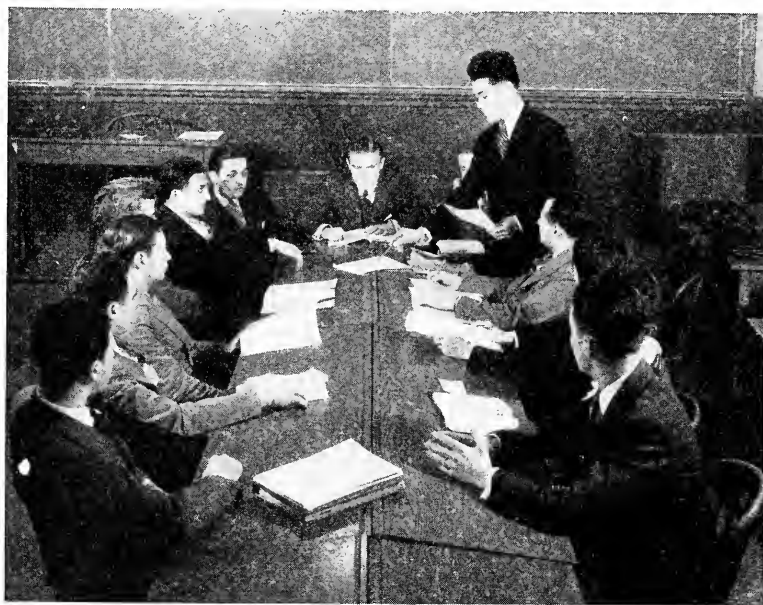
FOR STUDENTS

Many requests from employers are received by the School, during normal times, for young men of potential ability to fill important clerical and junior executive

positions. It is the policy of the School to serve the students whenever possible by placing them in those positions which promise attractive opportunities for development and advancement. The School, however, cannot guarantee to place its students, but it does endeavor to keep in close touch with those who desire placement service and to assist them in obtaining satisfactory advancements in positions and income. No charge is made for placement

service. Those needing this assistance should file an application at the School Office.

In recommending students for positions, preference is given to those who have completed a year or more of study in the School. The School must know something as to the abilities, habits, character, and general worth of an individual as revealed by his record as a student before it can recommend him for a position.



A Conference group discusses Management Policies, following an analysis by the Instructor

School of Business

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*The Faculty for the year 1938-39 is published during the summer.

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Instructor, *High School of Commerce*

ELIOT LELAND WIGHT,
B.A., *Yale University; University of Colorado,*
Graduate School

Advertising Principles and Campaigns;
Principles of Selling; Sales Management
Advertising Manager, *United States Envelope*
Company

PAUL ALMY WILKS,
A.B., *Harvard University*
Business English
Chief Accountant, *Strathmore Paper Company*

PROVIDENCE DIVISION

HOWARD SAMUEL ALMY
B.C.S., *Northeastern University*
Credits and Collections
Credit Manager, *Collyer Insulated Wire Company,*
Inc.

WILLARD CHRISLER BEATTY,
A.B., *Cornell University*
Business Reports and Conferences
Assistant Professor of Economics, *Brown Uni-*
versity

RALPH DOE BERRY,
Tufts College
 Marketing
Assistant Secretary, Davol Rubber Company

JOHN EDWARD CANDELET,
B.S., A.M., Colby College; M.B.A., University of Pennsylvania
 Business Economics; Business Statistics and Forecasting; Financial Organization
Comptroller and Head of Department of Economics, Rhode Island State College

JAMES HARPER CHASE,
A.B., M.A., Brown University
 Business English
Instructor, and Head of English Department, Central High School

CARL WILLIAM CHRISTIANSEN,
B.C.S., Northeastern University; C.P.A.
 Introductory Accounting
Partner, Christiansen-Murphy & Co.

SETH BRAYTON GIFFORD,
Ph.B., Brown University; C.P.A.
 C.P.A. Comprehensive Review
Partner, Harris and Gifford

ALBERT EDWARD GODFREY,,
B.C.S., LL.B., Northeastern University; C.P.A.
 Income Tax Procedure, Legal Aspects of Business
Treasurer, Lymansville Company

HARRY EDMUND HOWELL,
LL.B., Northeastern University; C.P.A.
 Constructive Accounting; Auditing
Controller, Grinnell Company

HOWARD ALLISON KENYON,
Ph.B., Brown University; C.P.A.
 Accounting Aids to Management
Partner, F. E. Welch & Co.

CHESTER TOTTEM MOREY,
B.S., Massachusetts Institute of Technology
 Management Problems and Policies
Superintendent, Rhode Island Tool Company

CLIFTON IRVING MUNROE,
A.B., Brown University; LL.B., Harvard University
 Public Speaking
Attorney at Law, Voight, Wright, Munroe and Clason

NICHOLAS PICCHIONE,
B.C.S., Northeastern University; C.P.A.
 Accounting Problems
Accountant, Ward Fisher & Co.

LEONARD HERBERT RUSSELL,
B.S., M.S., Rhode Island State College
 Fundamentals of Business Management; Economic Development of the U. S.
Head, Statistical Division, Unemployment Compensation Board of R. I.

BURTON WILLIAM SCHELLENBACH,
University of Cincinnati
 Modern Advertising
Copy-Chief, Larchar Horton & Co.

THEODORE DELMONT SHAPLEIGH,
B.S., Dartmouth College; M.B.A., Harvard University
 Business Planning and Research
Merchandise Manager, The Shepard Stores

CHARLES PECK SISSON,
A.B., Brown University; LL.B., Harvard University
 Government Controls in Business
Attorney at Law

ELMER REID SMITH,
Ph.B., A.B., Brown University
 Advanced English
Instructor, and Head of English Department, Central High School

SHERMAN LEWIS SMITH,
A.B., Dartmouth College
 Business Psychology
Sales Promotion Manager, Bostitch Sales, Inc.

ALLYN KINGSLEY SUTTELL,
Northeastern University; C.P.A.
 Intermediate Accounting
Accountant

WILLIAM WAGENKNECHT,
Ph.B., Brown University; C.P.A.
 Advanced Accounting Problems
Controller, B. A. Ballou & Co.

School of Business

Programs of Instruction

THE SCHOOL provides the following major programs of instruction for undergraduate students:

ACCOUNTING

1. A specialized program leading to the Certificate of Proficiency in Accounting.
2. A six-year program leading to the degree of Bachelor of Business Administration in Accounting. (See page 19.)

MANAGEMENT

A six-year program with opportunity for specialization in Marketing, Finance, and Management, leading to the degree of Bachelor of Business Administration in Management. (See page 22.)

LAW AND BUSINESS

A six-year program combining the study of law and business, leading to the degree of Bachelor of Business Administration in Law and Business. The law courses in this program are not available in the Providence Division. (See page 25.)

ENGINEERING AND BUSINESS

A six-year program combining the study of engineering and business, leading to the degree of Bachelor of Business Administration in Engineering and Business. This program is offered in Boston, Worcester and Springfield. (See page 27.)

SPECIAL PROGRAMS

Where the individual needs of a student necessitate, the School will provide special one-year, two-year, or longer programs to meet those needs. If, for good reasons, a student wishes to vary a regular program, he may do so upon securing approval from the Dean. (See page 27.)

SINGLE OR UNIT COURSES

For those who may wish to pursue one or more related or unrelated subjects instead of a certificate or degree program, opportunity is provided for enrolling in single or unit subjects. (See page 27.)

THE ACCOUNTING PROGRAM

Students of accounting in the School of Business may follow a program of training in this specialized subject which prepares them to take the examination for Certified Public Accountant (C.P.A.) or to carry on work of major responsibility in commercial accounting with private or public business firms.

Thoroughness of instruction is all-important. The trained accountant must be able to adapt himself quickly to the rapidly changing conditions of modern business. He should be ready to assume executive responsibility outside the field of accounting. This involves, of course, a background of understanding of various functions of business quite apart from the specialized accounting field. The accounting program includes prescribed subjects for the certificate of proficiency and adequate preparation for the C.P.A. examination.

Upon completion of the four years of prescribed subjects for the certificate of proficiency, students may take two years of additional study required for the degree of Bachelor of Business Administration. These two additional years are greatly to the advantage of the student, since they give an opportunity to study managerial and administrative subjects which fit him to assume responsibility outside of the accounting field, and give him the basic understanding of business at large which is of vital importance to accountants who hope to make real progress.

OPPORTUNITY IN THE ACCOUNTING PROFESSION

Taxation, legal requirements governing qualifications for listing in the stock market, corporation laws governing the preparation of financial reports, and many other developments in the conduct of busi-

ness have broadened the scope of accounting to such a degree that in normal times the supply of trained accountants is far inadequate to meet the demand. Moreover, a knowledge of accounting is universally regarded as essential in all phases of business management. There is a large field of public accounting which has not been developed, and with the increased emphasis which financial institutions are placing upon accounting, the need for college-trained Certified Public Accountants is increasing every year.

Opportunities in the field of accounting are almost unlimited. Financial returns compare favorably with those of other professions such as law, medicine, and engineering, but, unlike those professions, the accounting field is not crowded with university-trained men, so that unusual opportunities await the man of ability and university training in accounting to gain recognition and advancement.

The normal development of an accountant from the time he gets his degree is as follows:

First—as a junior assistant, he works on routine accounting procedure which is highly essential as a part of his experience. Compensation usually ranges from \$1,000 to \$1,500. The average man spends about two years in this position.

Second—as a senior assistant accepting some responsibilities, and performing somewhat of a professional service, the average man gets a salary which ranges from \$1,400 to \$2,500 a year.

Third—he now assumes full responsibilities for important assignments and becomes a senior accountant with a salary range from \$2,500 to \$5,000.

As a supervisor in charge of the work of other accountants, the salary range goes up to \$3,500 to \$10,000.

Fourth—The peak of success for accountants is firm membership. As a firm member, the accountant may not earn more than in the other higher positions, but usually earnings range from \$4,000 to \$25,000 a year, and frequently as high as \$50,000.

While the remuneration in the field of public accounting for properly trained men is attractive, the field of commercial and private accounting offers even more attractive inducement. The latest census figures show that there are 191,571 persons engaged as accountants and auditors in the United States. From trained accountants are selected many of the executives outside the accounting profession, including office managers, comptrollers, treasurers, and other officers of business concerns. Salaries of treasurers and comptrollers vary from \$4,000 to \$15,000; office managers from \$3,000 to \$6,000; chief accountants from \$2,500 to \$5,000. Many senior accountants have advanced into responsible executive positions paying \$10,000 and more.

QUALIFICATIONS FOR
SUCCESS IN ACCOUNTING

There is no easy or royal road to success in accounting. The technique can be mastered only through tedious and difficult routine work, comparable to the preparatory service of a doctor, lawyer, or engineer. Mathematical accuracy is extremely important. The student must learn to analyze logically and soundly; to visualize and present situations as they develop. Each step, however painstaking and laborious, must be mastered by one who hopes to succeed either as a public or private accountant. Above

all, the higher standards of honesty must be maintained, and the accountant's personal and ethical conduct must be above suspicion. The successful accountant is able to make a good appearance, to present an agreeable personality, and to express his ideas clearly in good English. Northeastern University School of Business tries to train its graduates so that they possess all these qualifications. The School encourages only men with the proper personal, mental, and educational qualifications to enter the profession.

REQUIREMENTS FOR
CERTIFICATE OF PROFICIENCY
(Four Years of Study Required)

Course Numbers*	Subjects	Semester Hours
A 1-2	Introductory Accounting	4
A 3-4	Intermediate Accounting	4
A 7-8	Accounting Problems	4
A 9-10	Cost Accounting	4
A 11	Auditing	2
A 13-14	Income Tax Procedure	4
A 15	Constructive Accounting	2
A 17-18	Advanced Accounting Problems	4
A 19-20	C.P.A. Comprehensive Review	4
E 1-2	Business English	4
Ec 1-2	Business Economics	4
Ec 3-4	Financial Organization	4
L 1-2	Legal Aspects of Business (C.P.A. Law)	4
	Business Experience	8
	Total Semester Hours Required for Certificate	56

* See notes at bottom of page 27.

**ADDITIONAL REQUIREMENTS
FOR B.B.A. DEGREE IN
ACCOUNTING**

(Two Years of Study Required)

<i>Course Numbers*</i>	<i>Subjects</i>	<i>Semester Hours</i>
E 3-4	Advanced English	4
E 5	Public Speaking	2
E 6	Business Reports and Conferences	2
E 7, 8	Business Readings	4
Ec 7-8	Business Statistics and Forecasting	4
M 7-8	Credits and Collections	4
M 9-10	Management Problems and Policies	4
	Business Experience	16
	Electives (4 semester hours to be chosen from the following)	4

 Total Semester Hours
Required for Degree 100

ELECTIVE SUBJECTS

D 1-2	Marketing	4
D 3	Principles of Selling	2
D 4	Sales Management	2

<i>Course Numbers*</i>	<i>Subjects</i>	<i>Semester Hours</i>
D 5	Modern Advertising	2
Ec 5-6	Investment Principles and Practice	4
Ec 9	Economic Development of the U. S.	2
M 5	Business Psychology	2
M 11-12	Government Controls in Business	4
M 13-14	Business Planning and Research	4
M 15-16	Business Administration Seminar	4

The normal period of attendance for the Certificate of Proficiency Program is four years, thirty-two weeks each year, three evenings a week, two hours each evening; for the B.B.A. Degree Program, six years, thirty-two weeks each year, three evenings a week, two hours each evening, except for those who enter with advanced standing credit. Students who wish to attend less than three evenings a week may do so, extending the time required to complete their programs.

* See notes at bottom of page 27.



*A background
of accounting
is essential in
a graduate's
qualifications
for success*

THE MANAGEMENT PROGRAM

"The field of business within the last twenty years has so widened and become so much more complex that the successful business man finds no limit set to his vision. As an executive he must possess the faculty of interpreting current events, the ability of analyzing situations, and a thorough knowledge of the principles underlying all successful business practice."*

The complexity of modern business makes it exceedingly difficult for those who are dependent upon their own experience to develop those abilities and obtain the knowledge so necessary for the desired advancement in business. A broad perspective of business organization and operation develops viewpoints and habits that promote clear thinking and sound judgments in business decisions. This broad perspective demands not mere facts but also that executive power which can initiate plans and put them into effective operation. This power is seldom acquired from experience in details but comes from a thorough knowledge of business principles and of the proper application of those principles to the solution of problems. Executive and managerial leadership demands that power; the School of Business through its Management Program proposes to develop it.

Conservative estimates indicate that in normal times about 24,000 college and university graduates enter commercial and business positions each year, and that there are 650,000 attractive opportunities for college men in the fields of business and public service. It will be seen that the number of college-trained men entering business careers in any given normal year fill less than 4% of the available opportunities attractive enough to interest these men. Of these 650,000 executive and other

higher positions 41% are in the field of distribution, 21% in industry, 6% in real estate, 6% in finance and banking, 6% in public service, 5% in insurance, 4% in accounting, and 4% in transportation. It is apparent that the fields of marketing, finance, and industry offer nearly 70% of the positions suitable for college-trained men.

A recent extensive study** of occupational opportunities shows that most college men who enter work in distribution, industry, transportation, and banking become involved sooner or later in some function of operating management where they become responsible for the direction of human effort within their organization. Those who enter insurance, real estate, investment banking, and distribution become primarily responsible for the selling of goods or services. Business Administration, as Northeastern University School of Business conceives it, involves the functions of co-ordinating and administering the efforts of men engaged in a common business enterprise.

The Management Program is primarily planned to train men and women who are now employed in business and industry for a more successful performance of their duties and responsibilities and to become more intelligent and useful members of society. While the program is primarily designed to further the students' vocational and economic interests, it does not ignore the values which come from a cultural appreciation. Students who pursue this program become acquainted with the major business functions such as marketing, finance, production, and accounting. They receive a thorough training in the principles of economics and the application of those

* Statement by Dr. Jeremiah W. Jenks, late President, Alexander Hamilton Institute.

** Dewhurst and Bossard, University Education for Business, Univ. of Pa. Press.



A class in Distribution, relating sales problems and methods, conducts its own sales demonstration

principles to modern business conditions. Through special attention to the problems of personnel, the student sees himself in relationship to executive and managerial responsibilities which he may be asked later to assume.

The question is frequently asked, "For what specific positions in business will this program prepare me?" The Dewhurst and Bossard study reveals that a small proportion of the graduates of the business administration programs in schools of business chose their occupation in the field of their specialization in college. It has been found that detailed vocational knowledge of special fields, except in the field of Account-

ing, can be taught more readily on the job than in the classroom. The School of Business takes the position that its program in Management should provide the student with a broad general background and understanding of the principles of business so that he can adapt himself readily to new situations as they arise, and make needed adjustments because of his ability to think analytically and soundly through a problem. In general, it may be stated that those who pursue this program in time will assume such positions as presidents, vice-presidents, owners of business enterprises, general managers, treasurers, sales managers, and department heads with

salary ranges from \$3,000 to \$25,000. Others may rise to positions of minor executive importance such as assistant treasurers, chief clerks, cashiers, office managers, credit managers, supervisors, and purchasing agents at salary ranges from \$1,500 to \$6,000.

**REQUIREMENTS FOR DEGREE
OF BACHELOR OF BUSINESS
ADMINISTRATION IN
MANAGEMENT**

<i>Course Numbers*</i>	<i>Subjects</i>	<i>Semester Hours</i>
A 5-6	Accounting Aids to Management**	4
D 1-2	Marketing	4
D 3	Principles of Selling	2
D 4	Sales Management	2
D 5	Modern Advertising	2
E 1-2	Business English	4
E 3-4	Advanced English	4
E 5	Public Speaking	2
E 6	Business Reports and Conferences	2
E 7, 8	Business Readings	4
Ec 1-2	Business Economics	4
Ec 3-4	Financial Organization	4
Ec 7-8	Business Statistics and Forecasting	4
L 1-2	Legal Aspects of Business	4
M 1-2	Fundamentals of Business Management	4
M 7-8	Credits and Collections	4
M 9-10	Management Problems and Policies	4
M 11-12	Government Controls in Business	4
M 13-14	Business Planning and Research	4
M 15-16	Business Administration Seminar	4
	Business Experience	24
	Electives (6 semester hours to be chosen from the subjects listed at right)	6

Total Semester Hours
Required for Degree 100

ELECTIVE SUBJECTS

<i>Course Numbers*</i>	<i>Subjects</i>	<i>Semester Hours</i>
A 3-4	Intermediate Accounting	4
A 9-10	Cost Accounting	4
D 7	Retail Advertising	
	Production	2
D 8	National Advertising	
	Production	2
Ec 5-6	Investment Principles and Practice	4
Ec 9	Economic Development of U. S.	2
M 5	Business Psychology	2

The normal period of attendance for this program is six years, thirty-two weeks each year, three evenings a week, two hours each evening, except for those who enter with advanced standing credit. Students who wish to attend less than three evenings a week may do so, extending the time required to complete their programs.

*, **, See notes at bottom of page 27.

LAW AND BUSINESS PROGRAM

(The law courses in this program are not available in the Providence Division)

The complexity of modern business activity makes it highly desirable for the lawyer to have an adequate knowledge of the principles of sound business administration. It is likewise becoming increasingly necessary for the business man to have a knowledge of the law. In order to meet this need and to provide such training for law and business students, the Evening School of Business of Northeastern University offers a combined six-year program in business and law leading to the B.B.A. degree.

All business is organized and conducted on a legal basis. For this reason executive positions in many business enterprises demand a knowledge of the law upon the part of those who are to be successful. Underlying the present large scale marketing and production which characterize modern business is a network of law which safeguards the rights of business men as they deal with one another and also defines the channels in which business practices shall be directed and through which they shall move. The man who approaches business with a keen knowledge of the principles of law underlying business will bring to his position an advantage which will be of inestimable value.

The combined six-year program provides a sound and basic knowledge of those principles of law and business so essential for success in the various fields of business. This program has been introduced in response to a request for a course of study which will adequately meet the needs of the following groups:

- 1 Those employed in banks and trust companies;
- 2 Insurance officers and claim adjusters;

- 3 Real estate operators;
- 4 Accountants;
- 5 Those engaged in executive positions in business and industrial organizations;
- 6 Those now in the legal profession.

The courses in law and business are taken simultaneously throughout the six-year period of study. The law courses are conducted by practicing attorneys. In order that students may gain an adequate knowledge of the law and may develop effectively the powers of legal analysis, the case method of instruction, commonly used in schools of law, is employed. In the Worcester and Springfield Divisions, students are assigned to classes in the divisional schools of law; in Boston, they may be assigned to the School of Law for instruction with the consent of the Dean.

Those who have already completed their law training in an approved school of law may receive advanced standing credit toward the B.B.A. degree for the law courses.

**REQUIREMENTS FOR DEGREE
OF BACHELOR OF BUSINESS
ADMINISTRATION IN LAW
AND BUSINESS**

Required Law Courses

<i>Course Numbers*</i>	<i>Subjects***</i>	<i>Semester Hours</i>
	Contracts	4
	Personal Property	2
	Sales	2
	Agency	2
	Bills and Notes	2
	Real Property	4
	Business Associations	4
Required Business Courses		
E 1-2	Business English	4

<i>Course Numbers*</i>	<i>Subjects***</i>	<i>Semester Hours</i>	ADDITIONAL COURSES FOR STUDENTS ELECTING TO SPECIALIZE IN MANAGEMENT		
E 6	Business Reports and Conferences	2	Required		
E 7, 8	Business Readings	4	<i>Course Number*</i>	<i>Subjects***</i>	<i>Semester Hours</i>
Ec 1-2	Business Economics	4	A 5-6	Accounting Aids to Management**	4
M 1-2	Fundamentals of Business Management	4	E 3-4	Advanced English	4
M 11-12	Government Controls in Business	4	Ec 3-4	Financial Organization	4
	Business or Professional Experience	24	Ec 7-8	Business Statistics and Forecasting	4
			M 13-14	Business Planning and Research	4
			M 15-16	Business Administration Seminar	4

**ADDITIONAL COURSES FOR
STUDENTS ELECTING TO
SPECIALIZE IN ACCOUNTING**

Required

A 1-2	Introductory Accounting	4
A 3-4	Intermediate Accounting	4
A 7-8	Accounting Problems	4
A 9-10	Cost Accounting	4
A 11	Auditing	2
A 13-14	Income Tax Procedure	4
A 15	Constructive Accounting	2
A 17-18	Advanced Accounting Problems	4

Elective (6 semester hours)

A 19-20	C.P.A. Comprehensive Review	4
D 1-2	Marketing	4
E 3-4	Advanced English	4
E 5	Public Speaking	2
Ec 3-4	Financial Organization	4
Ec 7-8	Business Statistics and Forecasting	4
Ec 9	Economic Development of the U. S.	2
M 5	Business Psychology	2
M 9-10	Management Problems and Policies	4
M 13-14	Business Planning and Research	4
M 15-16	Business Administration Seminar	4

Elective (10 semester hours)

D 1-2	Marketing	4
D 3	Principles of Selling	2
D 4	Sales Management	2
D 5	Modern Advertising	2
E 5	Public Speaking	2
Ec 5-6	Investment Principles and Practice	4
Ec 9	Economic Development of the U.S.	2
M 5	Business Psychology	2
M 7-8	Credits and Collections	4
M 9-10	Management Problems and Policies	4

The courses and hours listed are those offered in Boston. *For courses available in the Divisions in Worcester and Springfield, consult the Divisional offices in those cities.*

The normal period of attendance for this program is six years, thirty-two weeks each year, three evenings each week and two hours each evening, except for those who enter with advanced standing credit. Those who wish to attend less than three evenings a week may do so and take a longer period of time to complete their programs.

ENGINEERING AND BUSINESS PROGRAM

The Engineering and Business curriculum offers basic training by combining fundamental engineering and business courses in a six-year degree program. It provides reliable training for those now engaged in or who plan to enter positions of managerial responsibility in industrial or commercial enterprises where a scientific or engineering background is required.

Many technically trained men find it impossible to assume greater managerial responsibility because they do not have a knowledge of fundamental business principles so essential in many of the better positions in industry. On the other hand, many business trained men are employed

in industrial plants where a scientific background is most desirable if not necessary for advancement. This program has been developed to serve both groups.

In Boston, programs are available for major work in aeronautical, air conditioning, architectural, civil, diesel, electrical mechanical, and structural engineering. In the Worcester and Springfield Divisions, more general programs with a mechanical engineering major are offered.

For more detailed information, consult the special booklets issued by the School of Business in Boston or by the Divisions in Worcester and Springfield.

SPECIAL PROGRAMS AND SINGLE COURSES

Special one-year, two-year, or longer programs may be arranged to meet the needs of any student who does not find in the regular programs offered by the School the type of training desired.

Such programs must be approved by the Dean and are made up only from courses offered in the Evening Division of the University.

Any course may be taken singly or in combination by those who have the neces-

sary preliminary training to pursue with profit the course or courses selected.

Students should consult the schedules of courses offered in Boston and in the Divisions for a list of available courses. Full credit may be allowed for any of these courses, if the student taking a special program desires to become a candidate for a degree or a certificate, provided the courses he has pursued are a part of the degree or certificate program chosen.

*A double number, as M 1-2 or A 7-8, indicates a full-year course covering both the first and second semesters. A single course number, as A 11, indicates a half-year course covering only one semester. The letters indicate the classification of the course as: A, Accounting; D, Distribution; Ec, Economics; E, English; L, Law; M, Management.

**In case Accounting Aids to Management is not offered in the Divisions, students are required to substitute Introductory Accounting, and to take Intermediate Accounting as their elective subject. If Accounting Aids to Management is taken, Introductory and Intermediate Accounting cannot also be elected for credit, and vice versa.

***Students in this course who are employed in positions where a knowledge of Wills is of value may elect this course upon approval of the Dean of the School of Business. For a description of the Law Courses, see special bulletin. A copy will be sent upon request.

School of Business

Description of Courses

THE UNIVERSITY reserves the right to withdraw, modify, or add to the courses offered, or to change the order of courses in curriculums as may seem advisable.

The University further reserves the right to withdraw in any year any elective or special course for which less than twelve enrollments have been received. Regular students so affected by such withdrawal will be permitted to choose some other course. In the case of special students a full refund of all tuition and other fees will be made.

Students in Boston and in the Divisions in Worcester, Springfield, and Providence should consult the schedule of classes in the respective city where they are to attend for information as to courses given during the present year.

All full-year courses are numbered with a double consecutive number and all half-year courses with a single number. The letter or letters immediately preceding the numbers indicate the classification of the course.

ACCOUNTING (A)

Applicants for admission to the School who have had experience in accounting or bookkeeping or who have pursued systematic courses in institutions of less than college grade may take an Advanced Standing examination in Introductory Accounting. Those who pass this examination will be admitted to Intermediate Accounting and will receive full credit for Introductory Accounting except that the same subject cannot be offered both for admission credit and as a basis for advanced standing. See Advanced Standing credit statement, page 42.

INTRODUCTORY ACCOUNTING

A 1-2 Thirty-two sessions; 4 hours' credit. No previous knowledge of bookkeeping or accounting necessary.

This course provides basic instruction for those who plan to specialize in accounting or for those who wish to enroll later for more advanced courses. Emphasis is placed upon proprietorship accounts, including books of entry, statements, business practices, adjustments, and an introduction to partnership accounts. Drill and practice work are required for proficient handling of simple accounting transactions.

INTERMEDIATE ACCOUNTING

A 3-4 Prerequisite: A 1-2, or the passing of an advanced standing examination. Thirty-two sessions; 4 hours' credit.

A study of partnership accounting, including organization, dissolution, and liquidation of the partnership, major emphasis being given to the corporate form of accounts with special attention to manufacturing and trading activities. In addition to the drill and practice work on accounting technique, a mastery of basic principles of general accounting is required.

ACCOUNTING AIDS TO MANAGEMENT

A 5-6 Thirty-two sessions; 4 hours' credit. No previous knowledge of bookkeeping or accounting necessary.

A study of the broad background of accounting and business transactions so as to enable the student to analyze and interpret intelligently financial statements and other accounting re-

ARRANGEMENT OF PROGRAMS AND SCHEDULE OF CLASSES



FOR THE SCHOOL YEAR
1938-1939

Evening Sessions

NORTHEASTERN UNIVERSITY
SCHOOL OF BUSINESS

312 HUNTINGTON AVENUE, BOSTON, MASSACHUSETTS

ARRANGEMENT OF PROGRAMS

The programs on this and the next page are outlined in order that the student may see the approximate order of the various subjects. As indicated, certain courses are offered in alternate years. The School reserves the right to change the order of courses when advisable, but in general they will be given in the order designated. Courses marked with a (1) are offered in the first semester and those marked with a (2) are offered in the second semester. All other courses run throughout the school year.

Degree Program in Accounting

Provides a thorough preparation for the C.P.A. Examination, general accounting work, and for executive and administrative responsibilities. The degree of Bachelor of Business Administration in Accounting is conferred upon completion of this program. Students pursuing this program ordinarily attend three evenings each week throughout the school year.

First Year

Introductory Accounting (1)
Intermediate Accounting (2)
Business English

Second Year

Accounting Problems
Income Tax Procedure
Business Economics

Third Year

Advanced Accounting Problems
Cost Accounting
Financial Organization*

Fourth Year

Auditing (1)*
Constructive Accounting (2)*
C.P.A. Comprehensive Review
Legal Aspects of Business

Fifth Year

Credits and Collections
Business Reports and Conferences (1)
Public Speaking (2)
Management Problems and Policies*
Business Readings

Sixth Year

Business Statistics and Forecasting
Advanced English
Business Readings
Elective (4 semester hours)

For elective courses in this program, see catalog, page 21

Certificate Program in Professional Accounting

The first four years of the degree program described above constitute a practical and intensive preparation for the C.P.A. Examination and for general accounting work. Students completing this shorter program are awarded the Certificate of Proficiency in Accounting.

Degree Program in Management

The student in this program obtains an understanding of business so that he can adapt himself readily to new situations as they arise and make needed adjustments because of his ability to think analytically and soundly through business problems. This program definitely aims to develop executive abilities. The degree of Bachelor of Business Administration in Management is conferred upon the completion of this program.

Students pursuing this program ordinarily attend three evenings each week throughout the year.

First Year

Fundamentals of Business Management
Marketing
Business English

Second Year

Business Economics
Accounting Aids to Management
Principles of Selling (1)
Sales Management (2)

Third Year

Financial Organization*
Modern Advertising (1)
Credits and Collections
Elective (2 semester hours)

Fourth Year

Legal Aspects of Business
Management Problems and Policies*
Business Reports and Conferences (1)
Public Speaking (2)

Fifth Year

Advanced English
 Government Controls in Business
 Business Readings
 Elective (4 semester hours)

Sixth Year

Business Planning and Research*
 Business Administration Seminar
 Business Statistics and Forecasting
 Business Readings

For elective courses in this program, see catalog, page 24

Degree Program in Law and Business

This program provides a sound basic knowledge of those principles of law and business so essential for executive success. The degree of Bachelor of Business Administration in Law and Business is conferred upon the completion of this program.

Students have a choice of elective business subjects. Individual student schedules for the year are made in conference with the Dean of the School of Business. Following is the program for Law and Business students who specialize in Management.

First Year

Contracts
 Fundamentals of Business Management
 Business English

Fourth Year

Real Property
 Business Reports and Conferences (1)
 Elective (6 semester hours)

Second Year

Personal Property (1)
 Sales (2)
 Accounting Aids to Management
 Business Economics

Fifth Year

Business Associations
 Government Controls in Business
 Advanced English

Third Year

Agency (1)
 Bills and Notes (2)
 Financial Organization*
 Elective (4 semester hours)

Sixth Year

Business Planning and Research*
 Business Administration Seminar
 Business Statistics and Forecasting

For elective courses in this program, see catalog, pages 26 and 27

Degree Program in Engineering and Business

Offers training for managerial responsibility in engineering, industrial, and commercial enterprises where a scientific and business background is desired. The required engineering courses are offered in the Lincoln Technical Institute, a technical school affiliated with and conducted by Northeastern University.

Students in this program may elect scientific courses in aeronautical, air conditioning, architectural, civil, Diesel, electrical, mechanical, and structural fields. Individual student schedules are made in conference with the Deans of the Schools. The degree of Bachelor of Business Administration in Engineering and Business is conferred upon completion of this program.

(Information concerning this program will be mailed upon request.)

*Not offered in 1938-39, but offered in 1939-40. Where subjects are not offered in a given year, the schedule is so arranged that students take alternate subjects without loss of time or program inconvenience.

SCHEDULE OF CLASSES IN BOSTON

All classes meet from 7 P.M. to 9 P.M. unless otherwise indicated. Courses marked with a (1) are offered during the first semester and those marked with a (2) are offered in the second semester. All other courses run throughout the year.

<i>Evening</i>	<i>Subject</i>	<i>Opening Date</i>
	Accounting Aids to Management	September 12
	Business Psychology (2)	January 23
	Government Controls in Business	September 12
	Introductory Accounting (1)	September 19
<i>Monday</i>	Intermediate Accounting (2)	January 30
	Income Tax Procedure	September 12
	Investment Principles and Practice	September 12
	Marketing	September 19
	Retail Advertising Production (1)	September 12
	National Advertising Production (2)	January 23
<hr/>		
<i>Tuesday</i>	Business Statistics and Forecasting	September 13
	Legal Aspects of Business	September 13
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	Business Economics	September 14
	Fundamentals of Business Management	September 21
<i>Wednesday</i>	International Economic Relations	September 14
	Introductory Accounting (1)	See Monday
	Intermediate Accounting (2)	See Monday
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	Accounting Problems	September 15
	Advanced Accounting Problems	September 15
	Advanced English	September 15
	Business English	September 22
<i>Thursday</i>	Business Reports and Conferences (1)	September 15
	Credits and Collections	September 15
	Public Speaking (2)	January 26
	Principles of Selling (1)	September 15
	Sales Management (2)	January 26
<hr/>		
	Business Administration Seminar	September 16
	Business English	September 23
<i>Friday</i>	Cost Accounting	September 16
	Economic Development of the U. S. (2)	January 27
	Modern Advertising (1)	September 16

The University reserves the right to withdraw in any year any course for which less than twelve enrollments have been received.

ports. The course demonstrates the use of accounting in management and financial control. Emphasis is placed on the development of accounting fundamentals, preparation of financial statements, corporation and manufacturing accounts, evaluation of balance sheet items, analysis and interpretation of financial statements and other trends, and the use of accounting as an aid to management.

ACCOUNTING PROBLEMS

A 7-8 Prerequisite: A 3-4 Thirty-two sessions; 4 hours' credit.

Develops power of analysis in utilizing accounting data. Problems are used as the basis for instruction and discussion to cover the more advanced phases of financial statements and accounts found in the more complex business organizations.

COST ACCOUNTING

A 9-10 Prerequisite: A 3-4 Thirty-two sessions; 4 hours' credit.

Acquaints the student with the relationship of cost accounting to management and administra-

tion control and shows how adequate cost systems may further the intelligent management of business enterprises. Numerous problems serve as the basis for a study of the various accounts, records, systems, and methods commonly used in modern cost accounting.

AUDITING

A 11 Prerequisite: A 3-4 Sixteen sessions; 2 hours' credit.

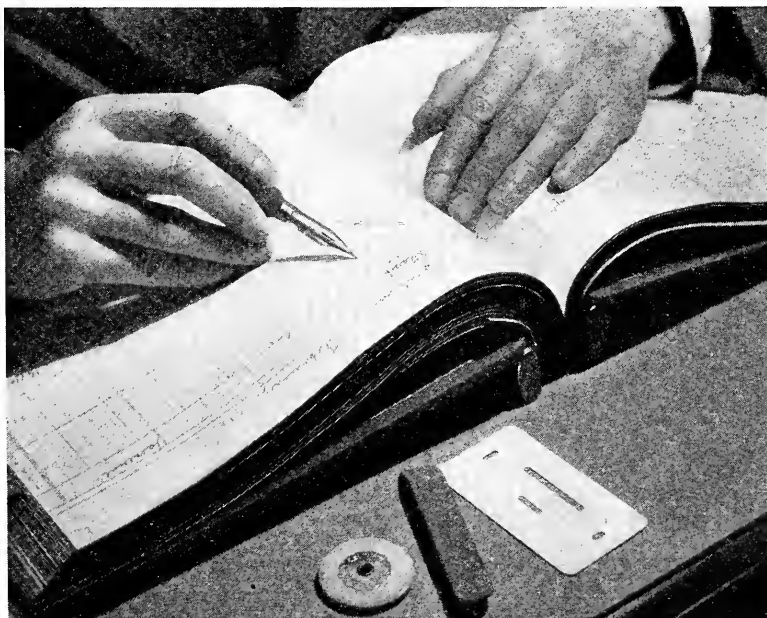
Accounting facts and practices are analyzed to determine whether or not they conform to professional practice. The work of the auditor in relationship to professional requirements, the mechanics of auditing, and the preparation of reports and certificates are studied.

INCOME TAX PROCEDURE

A 13-14 Prerequisite: A 3-4 Thirty-two sessions; 4 hours' credit.

A detailed study is made of Federal and State tax laws, their administration and application to the incomes of individuals; partnerships, corporations, and fiduciaries; treasury and tax department regulations and rulings; and of the

A simple accounting transaction is the groundwork for proficiency as a C. P. A.



decisions of the Board of Tax Appeals, and of various Federal and State courts. Practice in making out reports and returns, and a study of the procedure of handling claims, form the basis of applied instruction.

CONSTRUCTIVE ACCOUNTING

A 15 Prerequisite: A 3-4 Sixteen sessions; 2 hours' credit.

To acquaint students with the principles underlying the construction of accounting systems and the procedure of system installation. The course is developed by means of problem projects beginning with an analysis of the accounting needs of a small business. By gradual steps increasingly larger businesses are studied and accounting systems developed to meet their needs. Special attention is given accounting records in relation to the expansion of the accounting system.

ADVANCED ACCOUNTING PROBLEMS

A 17-18 Prerequisite: A 7-8 Thirty-two sessions; 4 hours' credit.

This course is designed primarily to meet the requirements of those students who intend to

enter the accounting profession or to assume responsibilities in commercial accounting. Emphasis in this course is devoted to specialized problems in connection with consolidations, mergers, holding companies, and other more advanced and complicated accounting situations. The course thoroughly prepares the student for the C.P.A. Comprehensive Review in final preparation for the State C.P.A. and American Institute examinations.

C.P.A. COMPREHENSIVE REVIEW

A 19-20 Prerequisites: A 9-10; A 11; A 17-18; L 1-2 Thirty-two sessions; 4 hours' credit.

This course provides a thoroughgoing and complete review of accounting theory and practice, and is intended primarily for those who contemplate taking the C.P.A. examinations. Practice in the classroom is provided under substantially the same conditions as exist in the C.P.A. examination room. Carefully selected problems, taken from C.P.A. examinations, in Auditing and Accounting Theory and Practice are worked out in the classroom, and are supplemented by lectures, demonstrations, and test questions.

DISTRIBUTION (D)

Marketing enters into and influences every field of business and includes not only the direct process of the sale of goods, but the whole organization by which goods find their way from the original producer to the ultimate consumer. The change in the economic structure during the past ten years growing out of higher standards of living, the development of new occupational interests, and the shift of population to large cities, has tended to increase the cost of marketing of goods. Just as the elimination of waste in production was the keynote of business fifteen years ago, the reduction of expense and the introduction of more efficient methods in distribution are the foremost thought of business leaders today. For this reason courses in marketing form one of the basic elements in a business education.

MARKETING

D 1-2 Thirty-two sessions; 4 hours' credit.

An understanding of the various methods in common use for selling goods, and of the typical problems that arise in the course of distributing goods from the manufacturer through the middlemen and dealers to the consumers is provided. The selling problems of the manufacturer, the wholesaler, the retailer, and the specialty agent are studied in relationship to the various types of industries and commodities.

PRINCIPLES OF SELLING

D 3 Sixteen sessions; 2 hours' credit.

This course deals with the evolution of modern salesmanship, its history, development and opportunities. The psychology of selling, preparation for the interview, the proper approach, arousing the buying urge, the meeting of sales resistance, the closing of the sale and the qualities of good salesmen and among the topics discussed.



The efficient direction of goods to the consumer is the primary aim of business today

SALES MANAGEMENT

D 4 Sixteen sessions; 2 hours' credit.

This is a continuation of the course in the Principles of Selling. It includes study of the types of sales organizations, the work of sales executives, sales planning and policies, sales campaigns, management of the sales force, financing of sales and the control of sales operations.

MODERN ADVERTISING

D 5 Sixteen sessions; 2 hours' credit.

A comprehensive course designed to familiarize the student with the nature and scope of advertising and its place in the commercial and economic structure. History, definition, and functions of advertising. Organization and functions of advertising departments and advertising agencies. Varieties of advertising and media. Problems, market investigation, planning campaigns. Laws, ethics, and regulations. A study of the broader aspects of advertising with special emphasis on current trends and developments.

RETAIL ADVERTISING PRODUCTION

D 7 Sixteen sessions; 2 hours' credit.

This course is devoted to the study of the elements of retail advertising. The various media used by retailers are considered with drill in the preparation of copy therefor. A study is made of institutional, straight merchandise, and sales copy as exemplified in current advertising of important retail concerns. The principles of layout receive attention as well as the mechanics of production including art work, plates, typography and printing. The aim is to furnish a practical foundation fitting students for a creative career in retail advertising.

NATIONAL ADVERTISING PRODUCTION

D 8 Sixteen sessions; 2 hours' credit.

This course approaches the subject of advertising from the standpoint of the national advertiser. Emphasis is placed on the planning and execution of national campaigns and the functioning of the advertising agency therewith. The place of newspapers, magazines, radio, street car, outdoor and point of sales advertising in national advertising is considered. A study is made of current copy techniques in national advertising with drill in the preparation of various forms.

ENGLISH (E)

The value that comes from the effective use of good English in business reports and communications is being increasingly emphasized by business leaders. All students who are candidates for the degree or certificate are required to pursue systematic courses in English. Those having outstanding deficiencies may be required to take additional courses in English.

BUSINESS ENGLISH

E 1-2 Thirty-two sessions; 4 hours' credit.

Efficient training is provided in the use of correct and forceful English for business purposes. Practice in the construction of sales, collection, credit and application letters, business articles, reports and newspaper stories provides opportunities for written expression on business topics. Study is devoted to the elements of logic as related to the organization and expression of thought. The course includes study of the fundamentals of sales promotion practice with special emphasis on buying motives. Oral work in class is intended to prepare students for participation in business conferences and public meetings.

ADVANCED ENGLISH

E 3-4 Prerequisite: E 1-2 or equivalent. Thirty-two sessions; 4 hours' credit.

Literature of value and interest to businessmen forms the basis of study and practice in writing so as to develop an effective easy style of expression. The student acquires a cultural basis which will serve not only as a source of entertainment in leisure hours but also an aid for business communications.

PUBLIC SPEAKING

E 5 Sixteen sessions; 2 hours' credit.

Those who wish to speak convincingly, to overcome self-consciousness, and to develop self-confidence will find this course meeting their needs. Students are trained in the selection and organization of speech materials, the delivery of the speech, and in other important essentials of effective speaking. The entire course is practical and not theoretical. Work is centered around the



The effectiveness of a written or spoken word is one measure of a man's business ability

interests and topics of business men and is specifically adapted to their needs.

BUSINESS REPORTS AND CONFERENCES

E 6 Sixteen sessions; 2 hours' credit.

This course is devoted to the preparation and presentation of business reports and to the techniques of planning for, participating in, and conducting business conferences. These reports and conferences are based upon business problems and situations. The nature of a thesis, the selection of a subject, the preparation of an outline, the collection and organization of data are considered in this course. Students are given the fullest possible opportunity to participate actively at each session.

BUSINESS READINGS

E 7 and E 8; 2 hours' credit for each course.

The two courses in Business Readings are designed to broaden the student's acquaintance with selected writings in the field of business and to introduce him to the real pleasure and values that come from such reading. There are no required lectures for these courses, each of which carries two semester hours' credit and for which a charge of one semester hour is made.

At the beginning of the Upper Middler and the Junior years, each degree candidate registers for a Readings course and is furnished a list of titles from which he makes selections for readings in accordance with the course requirements. Written reports are submitted on these readings, and are due on or before registering for classes the following year.

ECONOMICS (Ec)

Economics is the basic foundation upon which the general principles of business as a science are founded. A mastery of the underlying economic laws enables the student to see clearly the forces which business men must use in arriving at solutions to their problems. An appreciation and understanding of economics is a necessary factor in the equipment of a progressive business man.

BUSINESS ECONOMICS

Ec 1-2 Thirty-two sessions; 4 hours' credit.

The characteristics of modern business and industry are studied in terms of their operations and relationship to the modern economic system. Economic laws and principles are considered in terms of business conditions peculiar to our own time and country and how these laws govern prices, wages of labor, profits, credit, competition, work and working conditions, and rewards for business enterprise.

FINANCIAL ORGANIZATION

Ec 3-4 Prerequisite: Ec 1-2 Thirty-two sessions; 4 hours' credit.

The functions and services of money and credit as mediums of exchange are discussed. A detailed study is made of the organization and functions of modern financial institutions such as commercial banks, trust companies, investment security houses, savings institutions, stock exchanges, the Federal Reserve System, and other credit and financial institutions.

INVESTMENT PRINCIPLES AND PRACTICE

Ec 5-6 Thirty-two sessions; 4 hours' credit.

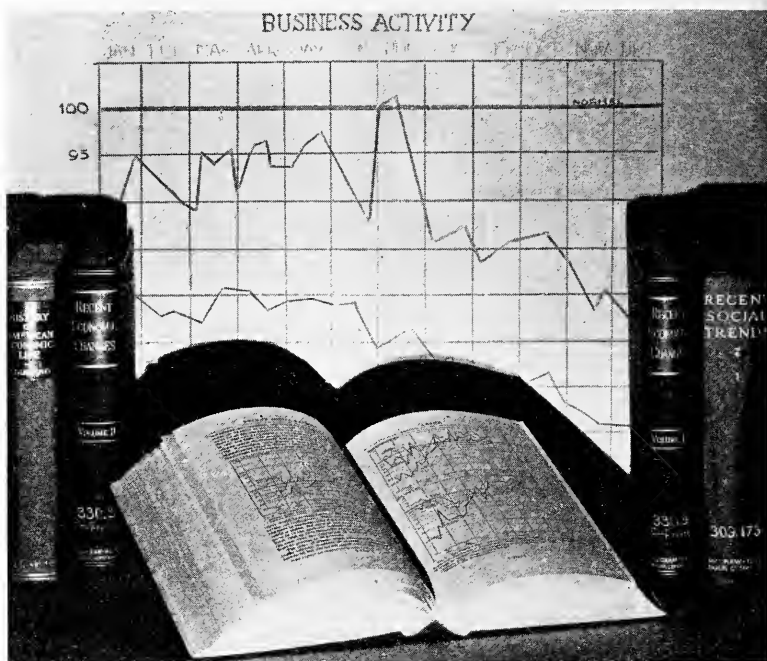
Consideration is given to the determination of investment policies and to the analysis of various kinds of securities such as types of bonds, preferred and common stocks, and their place and use in the investment field. Attention is also given to the economic factors and changes as they affect investments.

BUSINESS STATISTICS AND FORECASTING

Ec 7-8 Prerequisite: Ec 1-2 Thirty-two sessions; 4 hours' credit.

The objective of this course is to train the student to use statistics in making better analyses of the business problems than is possible without statistics. The point of view of the business man and not the professional statistician is maintained throughout the study. In the early part of the course the emphasis is placed upon the necessary technical methods, using

The proper application of economic principles often means the solution of an actual business problem



business problems as illustrations; in the second part of the course, the point of view is changed and the emphasis is placed upon solving practical problems, using statistical methods as tools when necessary. The practical application of statistics to business is directed toward business forecasting, business budgeting, production and labor, market analysis, investment and financial analysis, and executive and management statistics.

ECONOMIC DEVELOPMENT OF THE UNITED STATES

Ec 9 Sixteen sessions; 2 hours' credit.

A broad general survey is made of the economic and industrial development of the United States from the colonial period to the present time. Emphasis is placed upon the origin and development of American industries, changes in industrial and commercial policies, economic forces at work in business and social institutions, and upon problems arising from the growth and development of business and industry in the United States.

LAW (L)

In this School one systematic course in law as applied to business is offered. Those desiring more extensive courses in Law are referred to the courses in the Law and Business Program. (See next page).

LEGAL ASPECTS OF BUSINESS

L 1-2 Thirty-two sessions; 4 hours' credit.

A study of the application of legal machinery to the current needs and demands of modern

business for facilitating organization, credit, finance, security or protection from risks, marketing, and commercial and industrial peace. The course also provides excellent preparation for the law phase of the C.P.A. Examination.

OTHER LAW COURSES

Additional Law Courses available to students pursuing the Law and Business program are described in a special bulletin which will be sent upon request. These courses, conducted on a law school basis, are as follows:

Contracts	Real Property	Agency	Business Associations
Personal Property	Sales	Bills and Notes	

MANAGEMENT (M)

With the complex and rapidly changing conditions of modern business, the functions of administration and management must be clearly defined and maximum economies effected. Through the problem approach, these courses train the student to supplant guesswork and trial and error processes with organized knowledge and proven management methods.

FUNDAMENTALS OF BUSINESS MANAGEMENT

M 1-2 Thirty-two sessions; 4 hours' credit.

An introductory survey of the whole field of business administration with special emphasis upon training the student in the analysis of business problems. The functions of the business administrator are discussed with particular reference to the control policies and devices of the manager. The course presents the problems of business administration as an interrelated whole and helps the student to see the lines of study which lead to solution of those problems.

BUSINESS PSYCHOLOGY

M 5 Sixteen sessions; 2 hours' credit.

Business psychology is the study of predicting and influencing human behavior in business. It provides an understanding of man's mental life, of how the individual and the group behave and are influenced in their behavior, and of how the business man may predict and control his own behavior and that of those with whom he works. The study and analysis of the student's own personal problems and behavior constitute a valuable and interesting phase of the course.

CREDITS AND COLLECTIONS

M 7-8 Thirty-two sessions; 4 hours' credit.

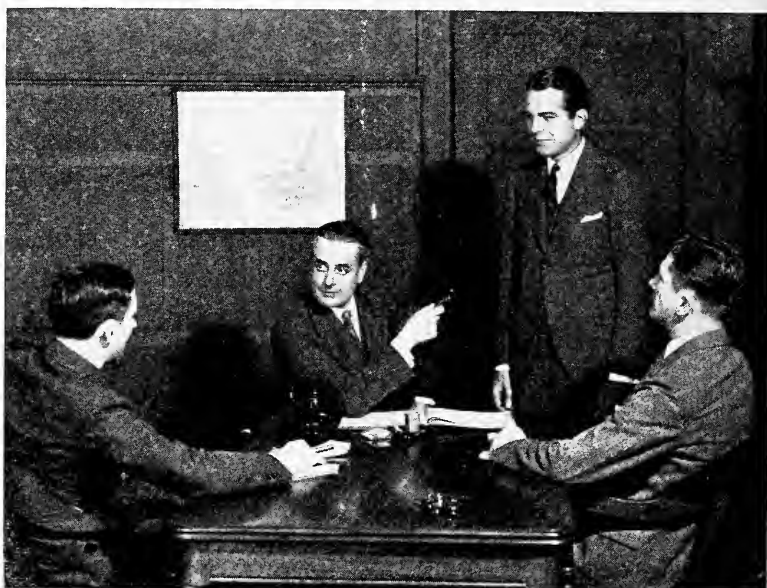
This course furnishes instruction in the theory of credit, the workings of a Credit Department, whether in the wholesale or retail field, and in the analysis and use of credit statements as aids to efficient management.

MANAGEMENT PROBLEMS AND POLICIES

M 9-10 Thirty-two sessions; 4 hours' credit.

Co-ordination of the functional relationships which exist between the different departments of business with the problems affecting the determination of administrative and managerial policies is the purpose of this study. Special attention is given to scientific management of industry and business and to the co-ordination of production with purchasing, sales, finance, and transportation. Cases and problems dealing with organization and expansion, consolidation and combinations, reorganizations, internal administration, industrial and human relations, and govern-

An appreciation of the problems of Management fits Northeastern men for quicker advancement



mental control form the basis of discussion and study.

GOVERNMENT CONTROLS IN BUSINESS

M 11-12 Thirty-two sessions; 4 hours' credit.

A study of the economic and political relationships which exist between business and government with particular emphasis upon the work of the Interstate Commerce Commission, Federal Trade Commission, the National Recovery Act, and the various codes developed under that act, also other government agencies including the U. S. Departments of Agriculture, Commerce, Labor, and particularly the Bureau of Labor Statistics. Social as well as economic aspects of government control will be considered.

BUSINESS PLANNING AND RESEARCH

M 13-14 Prerequisites: Ec 7-8, M 9-10 Thirty-two sessions; 4 hours' credit.

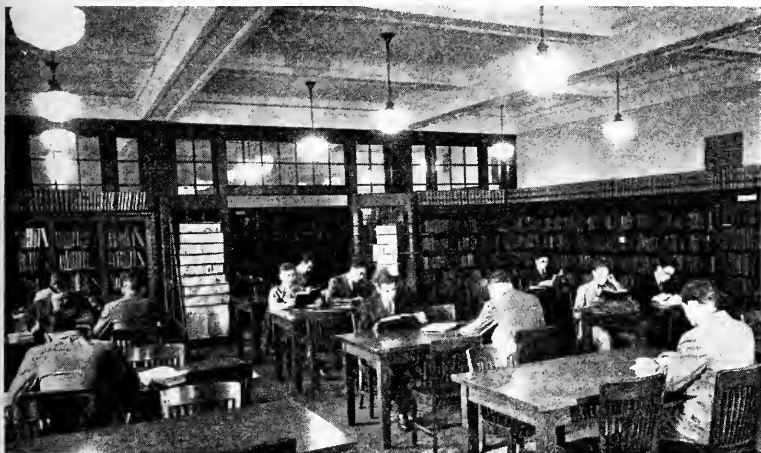
This course is devoted primarily to a study of economic and business planning and to the

technique of research and study in relationship to planning. The fundamental principles underlying the solution of research problems will be analyzed and students will be required to apply those principles to specific problems involving planning and research.

BUSINESS ADMINISTRATION SEMINAR

M 15-16 Prerequisites: A 5-6, D 1-2, Ec 3-4, Ec 7-8, and M 9-10 Thirty-two sessions; 4 hours' credit.

This course provides the unique opportunity to use the information acquired from other courses in an intelligent intimate discussion of live current problems which arise daily in marketing, production, and finance, with notes as to social significance. Emphasis is placed on the translation of problems out of the academic book atmosphere into the personal terms in which these problems must be met in business life and solved. Work is conducted upon a prepared individual conference basis.



19,473 volumes
for reference
and self-in-
struction

School of Business

General Information

CLASSROOMS AND LIBRARIES

The classrooms are furnished with modern equipment and are thoroughly adapted to evening school work. Improvements in classroom facilities are constantly being made to meet the needs of the student body.

The General Library of the University in Boston contains 19,473 volumes. A special section of the General Library contains 1,250 volumes of books on business subjects. In addition, the leading trade and business magazines are available for student use. Additions are constantly being made to the business section of the Library in recognition of the new demands for business education and research. The reading rooms of the Library are open from 8.45 A.M. to 10.30 P.M. daily, Sundays from 2 P.M. to 9 P.M., holidays 12 M. to 9 P.M.

All members of the School in Boston are entitled to the privilege of using the Boston Public Library including the Business Branch at 20 City Hall Avenue. The same privilege is accorded students in the Divisions for the use of the libraries in their respective cities.

In the Divisions at Worcester, Springfield, and Providence, libraries are being built up.

TEXTBOOKS AND SUPPLIES

The Northeastern University Bookstore is a department of the University and is operated for the convenience of the student body. All books and supplies which are required by the students for their work in the University may be purchased at the Bookstore. In addition, the Bookstore also carries a large number of general supplies. In Boston the main store is situated in the Main Building opposite the Treasurer's Office. A branch of the store is operated in Room 23 of the Huntington Building in

which not only school supplies but a variety of other articles are sold to meet the needs of the students.

In the Divisions, stores are located adjacent to the School Offices.

RECREATION AND OTHER ACTIVITIES

Men who are employed in offices or indoor occupations and who are pursuing a strenuous evening program of study should plan to take some systematic form of exercise in order that they may not impair their health and that they may do the most effective work.

Northeastern University is particularly fortunate in being able to place at the disposal of its students at moderate rates unexcelled recreational advantages. The Y.M.C.A. buildings have facilities in the nature of gymnasiums, swimming pools, bowling alleys, billiard rooms, game rooms, and social rooms where students obtain recreational privileges to their liking. Students may come from their work at the close of the day to the university building and enter a gymnasium class, take a swim, use the bowling alleys, or engage in other recreational pastimes before class time and thus renew their energy for the evening's work.

In addition, in the program of the various Young Men's Christian Associations will be found ample opportunities for religious, club, and other social activities.

Women students in the Worcester Division enjoy corresponding privileges at the Y. W. C. A.

STUDENT COUNCIL

The social and extra-curricular life of the School in Boston is in charge of a Student Council consisting of representatives from each class or school group. In addition to arranging for occasional social affairs,

special lectures, and meetings, the council represents the interests of the student body. The faculty and the officials advise with the council in regard to school policies.

HONOR FRATERNITY

Sigma Epsilon Rho is the only honor fraternity in the School of Business authorized and approved by the University. Its purposes are:

- 1 To promote acquaintance and good fellowship among those men who have attained highest scholastic standing in the School.
- 2 To stimulate the student body to higher scholastic accomplishment through the bearing, influence, and work of these selected men.
- 3 To develop methods of mutual improvement and advancement among the members of this fraternity.
- 4 To support high moral, professional and scholastic ideals.

Only students with honor standing are admitted to the fraternity. Admission is by invitation, after nomination by the School faculty.

An outstanding business book is awarded each year by Sigma Epsilon Rho Fraternity to the highest ranking student for that year in each of the Sophomore, Lower Middler, Upper Middler, and Junior Classes. Students will receive the award only in the event that they enroll for the subsequent year.

SCHOLARSHIPS, AWARDS, AND LOAN FUNDS

IN BOSTON

The following scholarships and awards are available to students enrolled for a normal schedule of twelve or more semester hours of class work who are pursuing a degree or certificate program in the School of Business in Boston. One-fourth of the scholarship is applied to the tuition of the recipient at each quarterly payment.

School of Business Honor Awards

A half tuition scholarship award is made each year to the highest ranking student of that year in the Junior, Upper Middler, Lower Middler, Sophomore and Freshman classes, who re-enrolls the following year for a normal schedule of study.

A quarter tuition scholarship award is made each year to the second highest ranking student of that year in the Junior, Upper Middler, Lower Middler, Sophomore and Freshman classes, who re-enrolls the following year for a normal schedule of study.

To be eligible for either a half or a quarter tuition honor award, a student entering the School with advanced standing credit, except by examination, must have completed at least twenty-four semester hours of classroom work at the time the award is made.

The Clarkson-Alumni Scholarship

This scholarship, made available through the generosity of the Alumni Association of the School of Business in Boston, is in memory of George S. Clarkson, a member of the Class of 1914 and an instructor in accounting for many years. This scholarship, which is indeterminate in amount, is granted to the student who obtains the highest final grade in the course in Auditing unless he is eligible for an award of greater monetary value in which event the Clarkson-Alumni award will be made to the highest ranking student in Auditing who is not eligible for such an award. To be eligible for this scholarship the student must pursue a normal schedule the following year.

Kappa Tau Phi Scholarship

This scholarship award, amounting to thirty dollars, is made available by the Kappa Tau Phi Sorority. It is granted annually to the woman student who ranks highest in her class at the end of the Sophomore year unless she is eligible for an award of greater monetary value in which event the award will be made to the highest ranking woman student who is not eligible for such an award. To be eligible

for this scholarship the student must pursue a normal schedule the following year. In determining this award grades of all courses completed in the Freshman and Sophomore years shall be considered.

Alumni Loan Fund

The Alumni Association of the School of Business in Boston has provided a loan fund which is available to students in the Senior and Junior classes in Boston who are in need of financial assistance in order to continue their studies. Applications for loans should be addressed to the Bursar of the University. All applications must be approved by the Alumni Loan Fund Committee.

IN SPRINGFIELD DIVISION

The following scholarship and loan funds are available to students applying for, or admitted to, curricula offered by the Springfield Division of the University:

Junior Scholarship

A scholarship of \$25 applicable to tuition of the next year is awarded annually at Commencement to that student of the Junior Class who has made the highest average grade in all courses from his Freshman to Junior years inclusive. The scholarship is donated by Delta Chapter of the Pi Tau Kappa Fraternity.

Sophomore Scholarship

A scholarship of \$25 applicable to tuition of the next year is awarded annually at Commencement to that student of the Sophomore class who has made the highest average grade in all courses of the first two years. The scholarship is donated by Alpha Chapter of the Epsilon Phi Sigma Fraternity.

Freshman Scholarships

Awards in multiples of twenty dollars toward Freshman tuition are available to graduates of the several Connecticut Valley high schools. They are made upon the basis of academic excellence for, and at the termination of, the full secondary school course. One of these is granted to that student who,

of the first ten in average for the course, shall stand highest of the number from this group who anticipate admission the subsequent fall to Northeastern University, Springfield Division.

Student Aid Fund

A limited fund originated by thoughtful undergraduates, augmented by certain faculty support, and the balance in a given year from student activities fees, from which meritorious students may obtain loans from time to time for tuition usage. It is administered by the Director of the Division. Applications for aid should be made through the Bursar.

IN WORCESTER DIVISION

Freshman Scholarships

Awards of \$50 toward Freshman tuition are available to graduates of several Worcester County high schools. They are made upon the basis of academic excellence for, and at the termination of, the full secondary school course. One of these is granted to that student who, of the first five in average for the school course, shall stand highest of the number from this group who anticipate admission the subsequent fall to Northeastern University, Worcester Division.

Sophomore Scholarship

A scholarship of \$50 is awarded at Commencement to that student of the Sophomore class who has made the highest average grade in all courses of the first two years, and who returns for the third year. The scholarship is applied toward the payment of the tuition of that year.

Senior Honor Award

An award of \$20 is made annually at Commencement to that student of the Senior class who has made the highest average grade in all courses from his Freshman to his Senior years, inclusive. This award is subject to certain regulations on file with the Governing Board of the Division.

School of Business

Administrative Policies

ADMISSION AND CLASSIFICATION OF STUDENTS

I. Classification as to Admission

All applicants admitted for degree, certificate, or special programs or for single courses are classified as regular or conditioned students.

1 Regular Students

Applicants for admission who present evidence of the completion of an approved secondary school course, or the equivalent 15 units,* may be admitted as regular students in the Accounting, Management, and Law and Business programs. Applicants for admission to the combined Engineering and Business curricula must include in their 15 units, 1 unit of Algebra and 1 unit of Plane Geometry.**

2 Conditioned Students

Applicants who do not meet the requirements for admission as regular students may be admitted as conditioned students with the approval of the Committee on Admissions under the following conditions:

- a. Applicants 21 years of age or older who do not present evidence of the completion of an approved secondary school course, or the equivalent 15 units* may be admitted if they present satisfactory evidence of ability to profit by study in the School.
- b. Applicants for admission to the combined Engineering and Business

curriculum who present at least 15 units* of secondary school work but whose secondary school work has not included 1 unit of Algebra and 1 unit of Plane Geometry may be admitted conditioned in these subjects.**

- c. Applicants between the ages of 18 and 21 who have completed at least 8 units* of secondary school work and who wish to pursue individual courses may be admitted provided they present evidence of ability to profit by such study and, in addition, pass the prescribed aptitude tests.

3 Removal of Conditions

Conditioned students (except that those conditioned in Algebra and Geometry** and those who are between 18 and 21 years of age may not use *d* as a basis for the removal of conditions) may remove their admission conditions and be reclassified as regular students by using *a*, *b*, *c*, *d*, or any combination of *a*, *b*, and *c*:

- a. By applying courses which they have completed in the School of Business at the rate of one unit for each two semester hours. (A course cannot be credited both towards the removal of admission conditions and towards the degree.)
- b. By applying units for work com-

*A unit represents a year's work in any subject in any approved secondary school constituting approximately a quarter of a full year's work, or the equivalent. A four-year day high school course is regarded as representing at least 15 units of work, or 3 units in junior high school and 12 units in a three-year senior high school.

**For additional requirements in the Springfield Division, consult special bulletin or the Division office.

pleted in an approved secondary school.

- c. By passing the examinations of the College Entrance Examination Board.
- d. By passing the prescribed Aptitude Tests, and maintaining an average scholastic grade of 70% in the prescribed program for the first twenty-four semester hours of work in the School, except that in no case may this program be spread over a period to exceed three years. Students must take the prescribed Aptitude Tests in the same school year in which they file their intentions to become candidates for a degree or a certificate. Credit earned prior to taking the Aptitude Tests cannot apply as a part of the prescribed program of twenty-four semester hours for the 70% scholastic grade. The Aptitude Tests are designed to select students qualified by general ability to profit by a university course in business. They

are not examinations in the subject matter of the secondary school course, and no specific preparation can be made for them. They are to test intellectual capacity and general fitness for university work rather than preparation for specific subjects.

Reclassification under this plan is not based upon any single factor but upon all factors affecting the achievement and ability of the student in the School. Students who fail to qualify for reclassification by this method may still be permitted to meet the requirements under *a*, *b*, and *c*.

II. Classification as to Program

Applicants who, at the time of admission, signify their intentions to qualify for the degree or certificate are further classified as degree or certificate students. Those who do not signify their intentions to qualify for the degree or certificate, but who desire to take one or more subjects are listed as unclassified students.

ADVANCED STANDING

Advanced standing credit in the School may be obtained in one or both of two ways, as follows:

- 1 *By Transfer of Credit.* Subject to the approval of the Administrative Committee, credit may be given for work completed in other approved schools, colleges, and universities. Applicants desiring credit by transfer should indicate their desire at the time the application for admission is filed. A copy of the catalog of the institution from which the transfer

is sought should accompany the application for admission.

- 2 *By Examination.* Applicants who desire to secure Advanced Standing Credit by examination are required to apply in writing for examination in those subjects for which credit is sought. Proper forms should be obtained from the School Office and filed at the time the application for admission is filed. Applications for examinations are approved by the Committee on Administration who will take into

account previous training, business experience, and other factors showing the applicants' special preparation and ability in the subject or subjects in which credit is sought by examination.

A grade of 75% must be obtained in an examination in order to secure advanced standing credit for the subject. Upon successfully passing an examination, the applicant is given full credit as though the subject had been pursued in the School.

The same subject cannot be offered both for admission credit and as a basis for advanced standing.

REGISTRATION

Before attending classes, students should report at the School Office for registration. Students are requested to assist in lessening congestion during the opening week by registering during the two weeks previous to the opening of the School.

Late registration for those unable to enter at the opening of the School year will be permitted at the discretion of the Dean, or the Director in the case of the Divisions.

THE SCHOOL YEAR

The School year is thirty-two weeks in length, exclusive of the two weeks' vacation at Christmas time, and is divided into two semesters of sixteen weeks each.

CLASS SESSIONS

In Boston, Worcester, and Springfield classes are held each evening of the week except Saturday. In Providence, classes are held on Monday, Wednesday, and Friday evenings. *The normal schedule for students pursuing a degree or certificate program is three evenings a week. Students may arrange their schedules so as to attend classes one, two,*

three, or four evenings a week depending upon the number of subjects taken. Students interested in the schedule of classes of any particular city should apply to the office of the school in the city in which they expect to attend.

NOTIFY THE OFFICE IMMEDIATELY

Of change of address.

Of withdrawal from any course — otherwise the fee for that course will be charged.

Of withdrawal from the School, giving date of the last session attended.

ATTENDANCE

The limited amount of time devoted to each subject and the rapid rate of progress in covering the essential content of a course make it highly desirable that students be present at every session. Because of the importance of regular attendance and its bearing upon the quality of scholarship, the policies governing attendance are:

- 1 Students who attend 75% or more sessions in a course are entitled to pass in that course if they attain a minimum final grade of D.
- 2 Students who attend between 50% and 74% of the sessions in a course are entitled to pass in that course if they attain a minimum final grade of C. Those who do not attain the minimum required grade of C may remove the condition only by means of a make-up examination in which they must receive a mark sufficient to raise the course grade to C.
- 3 Students who attend less than 50% of the sessions in a course will be considered ineligible to take the final examination or to receive any credit for the course.

- 4 Attendance credit is granted only when the student is in attendance at least three-quarters of the class period. Three separate absences of less than 30 minutes each constitute one complete absence unless such partial absences are canceled by satisfactory excuses.

OUTSIDE PREPARATION

It is expected that students will devote on the average two hours to preparation for each hour spent in the classroom. A student carrying a normal program of three evenings a week will, therefore, be expected to devote to outside preparation an average of eleven to twelve hours a week. Some courses require more time for preparation than others.

REGULAR EXAMINATIONS

The general policies governing regular examinations are:

- 1 A final examination will be held at the end of each course unless an announcement to the contrary is made.
- 2 The minimum passing grade in a regular final examination is D.
- 3 In case a student is excused from a final examination by the Administrative Committee, he may take the next regular or conditioned examination in the subject. The student who fails to complete a course within one year from the termination of that course must repeat the course, except that in special cases for justifiable cause, the Administrative Committee may waive this rule.
- 4 The student who has received a passing mark in a final examination and in a course may not take another examination

for the purpose of raising his grade unless he repeats the course in its entirety.

CONDITIONED EXAMINATIONS

The following policies govern re-examinations:

- 1 Permission for taking a make-up examination is dependent upon the quality of the work which the student has done throughout the course and is a privilege which the Administrative Committee may grant to students who have received an E grade or an incomplete (Inc.).
- 2 The conditioned or make-up examinations are given in September. Students should consult the School Office for the specific dates of each examination.
- 3 Only one make-up examination in any given subject is allowed for the purpose of removing a conditional failure.
- 4 A make-up examination for purposes of removing a conditioned or incomplete grade must be taken within the next school year. In such cases students may take either the examination at the conditioned examination period or the final examination when next given if within a period of one year. A fee of \$2 is charged for each School of Business examination taken out of course.
- 5 A minimum grade of 65% is required on each make-up examination unless a higher minimum is specified by the Administrative Committee.
- 6 Whatever grade the student obtains on the make-up examination is credited as the final examination grade, but in no case can the final grade in the course be more than 70% except in the case of students who have been excused from taking the regular final examination.

TESTS

Four tests in full-year courses and two tests in half-year courses are regularly scheduled. These tests are regarded as a part of the term or course work. Since no make-up tests are given, students who miss a test should confer with their instructors regarding their status.

MARKS AND CREDITS

1 The following system of grading is in use: Superior Work, A; Above Average Work, B; Average Work, C; Lowest Passing Grade, D; Unsatisfactory Work, E; Failure, F; Incomplete, Inc.

Students receiving an E, or unsatisfactory work grade, in an examination or as a final grade in the course, may remove the unsatisfactory grade by taking a make-up examination when it is next given, or at the time of the conditional examinations in September. The minimum passing grade of 65% is required on the make-up examination, unless a higher minimum is designated. In no case will a student taking a make-up examination be allowed more than a C for a final grade even though a higher grade may be obtained.

The policy is followed of mailing all grade and status reports to students instead of issuing these reports at the School Office or over the telephone.

2 A passing grade in a final examination as well as a passing final grade in the course is necessary in order to receive credit in the course.

3 Credit for one-half of a full-year course is not generally given, and in any event only upon approval by the Dean in advance of beginning the course.

4 In order to qualify for a degree or a certificate the student must maintain a general average of C for the entire program. This is not interpreted to mean that each course must be passed with a grade of C, but that the average of all courses must be at least C.

GRADUATION WITH HONORS

Honors are based upon the excellence of the work performed by the students in the School. Three honorary distinctions are conferred upon properly qualified candidates for the bachelor's degree upon graduation:

1 Highest honors to those who have completed all work with an average of 95% with no grade less than C.

2 High honors to those who have completed all work with an average of 90% with no grade less than C.

3 Honors to those who have completed all work with an average of 85% with no grade less than C.

These honors are subject to further conditions as follows:

1 To be entitled to honors a student must have completed a minimum of two full years of study in the School.

2 Courses credited by advanced standing whether by transfer or by examination will be eliminated in determining honors.

3 The work must be completed within the normal period of time of the prescribed curriculum.

PROBATION AND DISCIPLINE

The Administrative Committee in dealing with students whose work in the School

may be unsatisfactory or whose conduct is such as to make it inadvisable for them to continue as members of the student body, considers each case upon its individual merits. The following general principles are kept in mind in handling such cases:

- 1 Students whose scholarship in any given year is unsatisfactory may be dropped from the School or may be placed on probation with the privilege of spending a year in review.
- 2 Students whose scholastic record for two successive years is unsatisfactory, and who have been placed on probation for a year, will probably be counseled with and advised to make a readjustment of their programs by pursuing other types of training.
- 3 When a student is placed on probation, the probation is formally imposed for a definite time and can only be extended by approval of the Administrative Committee.
- 4 The Administrative Committee has the authority to dismiss from the School or place on probation at any time or to strike off from the list of candidates for the degree, any student whom it may deem unworthy either on account of unsatisfactory scholarship or for any great defect of conduct or character. The Committee may ask any student to withdraw from the School who is obviously out of sympathy with the aims and ideals of the School.

School of Business

Tuition and Other Fees

MATRICULATION FEE

The University matriculation fee of \$5 must accompany the initial application for admission to the University. This fee is not refundable.

TUITION FEES

Tuition fees for courses in the School of Business are based on a charge of \$10 a semester hour.

Complete Programs

A student carrying a normal program of three full-year courses throughout the school year will complete twelve semester hours of work for which the charge is \$120. This charge is payable in four payments of \$30, the first being due during the opening week of school and the other three during the weeks of November 14, January 23, and March 13.

Single Courses

The charge for each half-year course carrying two semester hours' credit is \$20, payable in two payments of \$10, and for each full-year course carrying four semester hours' credit, \$40, payable in four payments of \$10, except that payment for any course must be made during the semester in which the course is completed.

Deferred Payment Privilege

Students who would be denied the advantages of a systematic education if re-

quired to meet the tuition payments in the manner specified above, may make other payment arrangements with the Bursar. A nominal charge is made for this service.

Courses in Other Departments of the University

School of Business students assigned to courses in other departments of the University are charged the tuition rates and other fees effective in the departments to which they are assigned.

LATE REGISTRATION

No reduction in tuition is made for late registration. A student is neither entitled to classroom privileges nor considered as registered and enrolled until tuition due has been paid or satisfactory arrangements made in person with the Bursar.

STUDENT ACTIVITIES FEE

An activities fee is charged all students on the following basis:

\$1 for students enrolled for courses not exceeding four semester hours.

\$2 for students enrolled for courses exceeding four semester hours.

The fee is payable during the opening week in September. Students registering in the second semester pay the fee at the time of registration. It is administered by the University authorities in the interest of the students, and is used primarily to promote extra-curricular activities.

OTHER FEES

A fee of \$2 is charged for each make-up examination or advanced standing examination. This fee must be paid on or before the date of the examination.

A thesis fee of \$20 is required of all degree candidates who elect to write theses. This fee is payable upon presentation of the thesis which is due not later than March 15 of the year in which the student expects to receive the degree.

The University graduation fee, charged to those who are candidates for a degree, is \$10, payable on or before May 1st of the year in which the student expects to graduate. A fee of \$5 is charged to all candidates for a certificate and is payable on or before May 1st of the year the program is to be completed.

EXPENSE FOR BOOKS AND MATERIALS

Students purchase their own textbooks and working materials. The cost varies according to the subjects for which the student is enrolled. The average cost for a normal program of three subjects is about \$13, with a maximum of approximately \$20. The textbooks for single courses range from \$1.25 to \$5.

GENERAL FINANCIAL INFORMATION

Checks should be drawn payable to Northeastern University.

Students who have withdrawn from a course for good cause and who are permitted to repeat it are credited with the tuition previously paid on that course. The credit cannot be applied, however, until the balance due on the course has been paid.

Students are not permitted to attend class sessions or take any examinations or

tests until they have paid their tuition fee or have made satisfactory arrangements for payments.

Students will not be advanced in class standing, or permitted to re-enroll in the University, nor will degrees be conferred until all financial obligations to the University have been met.

No certificate of honorable dismissal will be issued to any student who has not fully met his financial obligations to the University.

WITHDRAWALS AND REFUNDS POLICY

In the event a student is obliged to withdraw from the School in which he is enrolled for causes deemed adequate by the Committee on Withdrawals, the balance of the tuition paid after the following deductions have been made will be refunded:

- a. Four per cent of the total yearly tuition charge shall be deducted for each week of attendance or fraction thereof in the event of enrollment for a full school year.
- b. Ten per cent of the total tuition charged shall be deducted for each week of attendance or fraction thereof in the event of enrollment for a semester.

The amount of tuition to be charged in the case of withdrawals shall be computed as indicated under a and b above from the date of each quarterly payment.

Matriculation, examination, thesis, and other fees are not refundable except that graduation and certificate charges will be refunded in case of non-qualification.

No refunds are granted unless the application for withdrawal is filed within forty-five days after the student has ceased attendance.

School of Business

Degrees Conferred and Theses Presented in 1937

BOSTON

BACHELOR OF BUSINESS ADMINISTRATION

PAUL FRANCIS HARRINGTON, *Evaluation of Large-Scale Mail Order Merchandising*

THEODORE KAAKINEN, *Accounting for Fire Department Tax of Illinois*

HARRY JOHN MAHAKIAN, *The Establishment of a Doughnut Manufacturing Concern and Its Complete Operation*

JOHN DANIEL NORTON, *Who shall Own and Operate Our Electric Utilities?*

ALFRED HEINZ RICHTER, *A Study of the Causes of Labor Turnover and Methods of Reducing Them*

FRANCES S. SLOBINS, *Fashion Copyrights*
WILLIAM FREDERICK SPARKS, *Credit Manual for a Manufacturing Company*

EDMUND GEORGE THOMAE, *Economic Status of the Alcoholic Beverages Industry*

CHARLES FEHNINGER WILSON, *Accounting—Its Part in the Retail Department Store Merchandising Control*

WORCESTER DIVISION

BACHELOR OF BUSINESS ADMINISTRATION

ALBERT EDWARD CLARKSON, *A Comparative Study of the Development of the Apprenticeship Systems and Vocational Education*

RICHARD ALLEN HOWARTH, *Adaptation and Comparison of Tabulating Machine Methods to Accounts Receivable*

RAYMOND EMMANUEL JOHNSON, *Marketing of Leather Belting and Its Relation to the Modern Group Drive*

RONALD LESTER MOREY, *Depreciation and Its Relation to Federal Income Taxes Under T. D. 4422*

RITA AGNES RYAN, *Real Estate Mortgage Bonds — Security or Hazard?*

RUDOLPH H. ALFRED SJOGREN, *The Administrative Significance of Municipal Charter Revision in Worcester, Massachusetts*

SPRINGFIELD DIVISION

BACHELOR OF BUSINESS ADMINISTRATION

ELLWOOD DUANE BROWN, *A Study of Operations of Production Credit Associations in New England, New York, and New Jersey*

JOHN ANTHONY BURRIDGE, *The Metric System vs. The English System as a Legal Standard of Measurement in the United States*

ARTHUR ASHLEY COPP, *A Comparative Study of the Old and New Methods of Insulating the Home*

ROBERT PHILIP CUNNINGHAM, *A Comparative Study of the Basis for Extending Bank, Personal, and Instalment Credit*

JOHN IRVING FINN, *Sales Possibilities of Small Motors*

VIOLA FEAREBAY HOGAN, *The Administration of Small Trust Funds—Is the Common Trust Fund a Solution?*

WILLIAM BERNHARD FRIEDERICH HOPPE, *Development and Marketing of an Automatic Bread Slicing Machine*

WALTER EDWARD KUSNICK, *Managerial Problems of a Bus Corporation*

NICHOLAS ANTONIO LATINO, *The Manufacture of Radio Coils*

THOMAS FRANCIS LYNN, JR., *A Comparative Study of Sales Methods to Determine an Improved Method for the Ordnance Department*

RICHARD ERNEST MENZEL, JR., *A Comparative Study of the Wholesale-Retail and House-to-House Distribution of Bakery Products*

KURT FRIEDRICH SEMISCH, *Standardization and Cost Control for a Cotton Spinning Mill*

CLAYTON VAUGHN SISSON, *The Trend in Automatic Screw Machines*

LA DOYT KARL TEUBNER, *A Study of the Sources, Ages and Trades of the Unemployed at*

Westfield, Mass., and the Efficiency of These Men When Employed on Federal Emergency Relief Construction Work

JOHN GUSTAVE WALZ, *Present-Day Domestic Refrigeration*

WITH HONOR

LEON HENRY THIEM, *Federal Regulation of the Motor Truck Carriers and Its Effect on the Motor Carriers*

PROVIDENCE DIVISION

BACHELOR OF BUSINESS ADMINISTRATION

ALAN GEORGE BENNION, *Accounting for Security Dividends*

ALVA LANDRY BOURRE, *The Development of a Budget System for the Manufacturing Cost of a Worsted Mill*

EDWARD FRANCIS COLLINS, *The Marketing of Wool in the United States*

JAMES EDWARD GORMAN, JR., *Computation of Unit Costs in the Lace Industry*

GEORGE THEODORE HELM, *A Standard Cost Accounting System for a Textile Finishing Plant*

LEONARD EDLIND JOHNSON, *Short Selling, Its Advantages and Its Faults*

HAROLD MARGERSON, *Current Practice in Percentage Lease Arrangements*

CECIL ELDEN STILES, *The Budget as an Instrument of Control in Newspaper Publishing*

WITH HONOR

SOLOMON ELI SELINKER, *Inventory Control for a Retail Furniture Store*

School of Business

Register of Students, 1937-38

GRADUATE STUDENTS

CANDIDATES FOR M.B.A. DEGREE

BOSTON

EUERLE, GEORGE A., *B.B.A., Northeastern University*

MORGAN, JOHN C., *B.S., New Hampshire University*

SPRINGFIELD DIVISION

YEATMAN, ALWYN F., *B.S., Massachusetts State College*

WORCESTER DIVISION

LECOUR, RICHARD H., *B.S., Tufts College*

PROVIDENCE DIVISION

HORAN, NORMAN F., *Sc.B., Brown University*

UNDERGRADUATE STUDENTS

BOSTON

ALBERG, ALICE L.	Jamaica Plain	CLAYTON, GEORGE R.	Methuen
ALTVATER, GEORGE W.	Lynn	CLIFFORD, JOSEPH L.	Kendal Green
AMES, THOMAS W.	Quincy	COCHRAN, ALAN J.	Somerville
ANDERSEN, VINCENT W.	Newtonville	COCKCROFT, LILLIAN M.	Everett
ANDERSON, ALFRED F.	Hyde Park	COGGESHALL, HARRISON H.	Brighton
ANDERSON, FRANK T.	Medford	COHEN, JOSEPH	Dorchester
ANDERSON, ROBERT F.	Westwood	COLE, EDWARD H.	Wollaston
ANDERSON, ROY C. A.	Hyde Park	A.B., Harvard University; LL.B., Northeastern University	
ANDERSON, WILLIAM C.	Salem		
ANDREW, WILLIAM A.	Quincy	COLLINS, ALBERT W.	Cambridge
AYER, BERNARD F.	Malden	COLLINS, VINCENT M.	Lynn
		COMSTOCK, MARY A.	Boston
		B.B.A., Northeastern University	
BABIN, EDWARD J.	Dorchester	CONDON, THOMAS W.	Lynn
BAKER, MURIEL	Belmont	CONNOR, JAMES L.	Dorchester
BANCO, VINCENT J.	Mattapan	COOK, HERBERT E.	Jamaica Plain
BARBATO, ALPHONSE W.	Watertown	COOKSON, EVERETT D.	Boston
BARNABY, ROLAND E., JR.	Revere	COOPER, WALTER C.	West Medford
BARRAVECCHIO, VITO	East Boston	CORAIN, NATALE	Swampscott
B.C.S., Northeastern University		CORCORAN, ELEANOR J.	Arlington
BARTON, CHARLES S.	Beverly	CORRY, LOUIS A.	Franklin
BARTOW, HOWARD K., JR.	Hingham	CORKUM, GEORGE W.	Newton Highlands
BATCHELDER, HOWARD E.	Swampscott	CORRIGAN, JOSEPH J.	Sherborn
BAUMAN, WILLARD F.	Boston	COSTELLO, THOMAS J.	Arlington
BEATON, ARTHUR K.	Allston	COX, ELMER H.	Brighton
BELANGER, ALFRED J.	Brookton	CREIGHTON, CHARLES	Boston
BENTLEY, HORACE E.	Winthrop	CROWLEY, HELEN E.	Allston
BERMAN, WILLIAM M.	Brookline	CROWLEY, JOHN F.	Somerville
BERNSTEIN, ISADORE	Chelsea	CROWLEY, JOSEPH T.	Woburn
BEYER, FREDERICK A., JR.	Hyde Park	CROWLEY, ROSE	Allston
BEZANSON, PHILIP H.	Brookton	CUNDARI, EDWARD J.	South Boston
BIENSTOCK, ADOLPH	Roxbury		
BLOOD, GORDON R.	Somerville	DAHLBY, MILDRED A.	Quincy
BOETTJE, GERARD H.	Dedham	DANFORTH, VERNON F.	Holliston
BOETTE, JOHN F.	Lynn	DANTZKER, PHILIP F.	Lynn
BONZAGNI, AUGUSTINE J.	Melrose	DEAN, PAUL D., JR.	Brookline
BORTMAN, ANNE L.	Roxbury	DECOURCY, DONALD J.	Lynn
BOURNE, MERTON F.	Melrose	DELANEY, JAMES B.	Natick
BOURQUE, VICTOR M.	Lynn	DICKINSON, M. JOHN, JR.	Melrose
BOWEN, RALPH F.	Attleboro	DOBROV, SIDNEY P.	Lynn
BOWERS, HAROLD B.	Concord	DONNELLY, FRANCIS M.	Arlington
BOWLER, LOWELL W.	Winchester	DONOVAN, ROBERT C.	Arlington
BOYD, WILLIAM H.	Wellesley Hills	DOYLE, EARLE F.	Hudson
BOYLE, JAMES H.	Boston	DOYLE, FRANK J.	South Boston
BRAY, HOWARD A.	Boston	DOYLE, JAMES J.	Medford
BRESLIN, FRANCIS J.	Allston	DOYLE, JOHN P.	Cambridge
BRIDGHAM, ALBERT F.	Braintree	DROLETTE, STANLEY A.	Roslindale
BROOKS, THOMAS W.	Lynn	DUDLEY, ALDEN W.	Swampscott
BROUSSARD, JOHN H.	East Boston	B.S., Northeastern University	
BROWN, ARTHUR C.	Bolton	DUFFY, THOMAS H., JR.	Woburn
A.B., Brown University		DUGGAN, THOMAS S., JR.	Quincy
BROWN, JOSEPH J.	Somerville	DURKEE, FREDERICK H.	Brookline
BROWN, MILO F., JR.	Brookline	DWYER, JAMES T.	Salem
BRUNNER, JOHN G.	Newton	DYSON, EDWARD	Mattapan
S.B., Massachusetts Institute of Technology		DYSON, JAMES H.	Milton
BUCK, JOHN G.	Medford		
BULGARIS, ARTHUR C.	East Boston	EARLE, GORDON R.	Cambridge
BURNS, JAMES F.	Cambridge	EARLS, FRANCIS P.	Brighton
		A.B., Boston College	
CAIN, ORA J.	Wollaston	EBLING, WILLIAM H.	Wakefield
CALLAHAN, HELEN T.	Methuen	EDMONSTON, LESLIE M.	Wollaston
CANDIS, GREGORY G.	Boston	EGGERS, EARL H.	Framingham
CANNISTRARO, IGNATIUS	Waltham	ELDRIDGE, MARCHANT W.	Arlington
CANNISTRARO, NICHOLAS	Waltham	ELLIS, ROBERT E.	Boston
LL.B., Suffolk Law School		EMILSON, ERIC J., JR.	Brookton
CAPONE, HAROLD N.	Boston	ERICKSON, WINNIFRED J.	Wollaston
CARLSEN, ARTHUR O.	Belmont		
CARLSON, MARTIN H.	Brookline	FAIRBANK, CHARLES W.	Salem
B.S., University of Vermont		FAIRBURN, ROBERT S.	Cambridge
CARROLL, ALFRED S.	Wellesley Hills	FALLON, MARY C.	North Billerica
CARROLL, WALKER A.	Wellesley Hills	FARRELL, FRED M.	Lynn
CARVILL, HENRY V.	West Roxbury	FERGUSON, PRESCOTT W.	Lynn
CARY, CHARLES O.	Jamaica Plain	FERRARESI, FRANK L.	Somerville
CASPERSON, CARL E.	Readville	FERRIS, EUGENE J.	Roxbury
CASPERSON, JOHN H.	Hyde Park	FIELD, WENDELL D.	Lowell
CATALDO, VINCENT, JR.	Lynn	FINKEL, JULIUS	Roxbury
CHANCE, FRANK A.	Cambridge	FISHER, MYRON M.	Dorchester
CHEERY, ROBERT W.	Wollaston	FITZGERALD, JOHN J.	Cambridge
CHESTER, JOHN P.	Newton Centre	FLEISCHER, SIDNEY	Dorchester
B.S., Wesleyan University		FLYNN, JAMES H.	Somerville
CHODOSKI, STANLEY J.	Boston	FOGEL, EDWARD I.	Cambridge
CLARK, WILLIAM H.	Waltham	FORSGREEN, RALPH V.	Belmont
CLATTENBURG, WILLIAM P.	Boston	FORWARD, EDWIN M.	Framingham

FRANK, CLARENCE L.	Wollaston	JACKSON, IRENE C.	Boston
FREEDMAN, HERBERT S.	Chelsea	JACKSON, LUTHER M.	Waltham
FREEMAN, FRANK P., Jr.	Lynn	JAMES, ROBERT W.	Lexington
FRENCH, EDWARD L.	Waltham	JOHNIDES, CONSTANTINE J.	Boston
FRESHMAN, WILLIAM	Dorchester	JOHNSON, ERNEST C.	Dorchester
FRITSCH, LOUIS H.	Cambridge	<i>LL.B., Northeastern University</i>	
FRYHON, STANLEY O.	Dorchester	JOHNSON, LEONARD V.	Lynn
FUDGE, EDWARD W.	West Somerville	JOHNSON, WALTER B.	Dedham
<i>B.C.S., Northeastern University</i>		JONES, FRANK L., Jr.	Milton
		JUNEAU, COURTNEY H.	Boston
GALVIN, FRANCIS E.	Cambridge	KARLIN, ARTHUR	Roxbury
GAMBLE, LAWRENCE E.	Beverly	KEEFE, CATHERINE J.	Norwood
GAMMONS, ALBION F.	Methuen	KEELER, EVERETT B.	Brighton
GANNON, ROBERT F.	Brighton	KENNEDY, KATHRYN A.	Somerville
GARABEDIAN, JOHN S.	Holbrook	KENNEDY, NORWOOD P.	Medford
GARR, STUART L.	Dorchester	KENNEY, WILLIAM J., Jr.	Brookline
GASCON, ADELBERT J.	Boston	KESSEL, ABRAHAM	Revere
GAY, NORMAN L.	Medford	KETHRO, JOHN G.	Frammingham
GEDGES, ANNE E.	Dorchester	KOE, ARTHUR W.	Dorchester
GEORGE, HENRY S.	Boston	KONET, HENRY W.	Rosindale
<i>B.C.S., Northeastern University</i>		KONETZKY, E. WALTER	Rosindale
GERMANIC, MORRIS	Boston	KOPIECKI, ALBERT D.	Lynn
GERRISH, WINSLOW F.	Melrose	KOZAK, GEORGE L.	Norwood
GIBBONS, FREDERICK J.	Frammingham	KRUGLAK, BARNET	Chelsea
GIBSON, EARL F.	Forest Hills	KUEMPFL, PETER	Boston
GIFFORD, ALLAN F.	Boston		
<i>B.S., Northeastern University</i>		LADD, WALTER I.	Weston
GILES, FREDERICK A., Jr.	Milton	LALOR, RICHARD H., Jr.	Mattapan
GILLESPIE, ROBERT E.	Lynn	LANCAON, JUAN S.	Medford
GILLIGAN, CHARLES N.	Cambridge	LAPLANTE, ETHEL S.	Cambridge
GILDDEN, HERBERT W.	Brookton	LARSON, LENNART J.	Somerville
GIOWACKI, WALTER W.	Lawrence	LAUZON, LEONARD G.	Lynn
GLUNTS, GERALD I.	Waban	LAWRENCE, ARNOLD W.	Rosindale
<i>Ph.B., Brown University; LL.B., Boston University</i>		LAWRENCE, ISAAC M.	Dorchester
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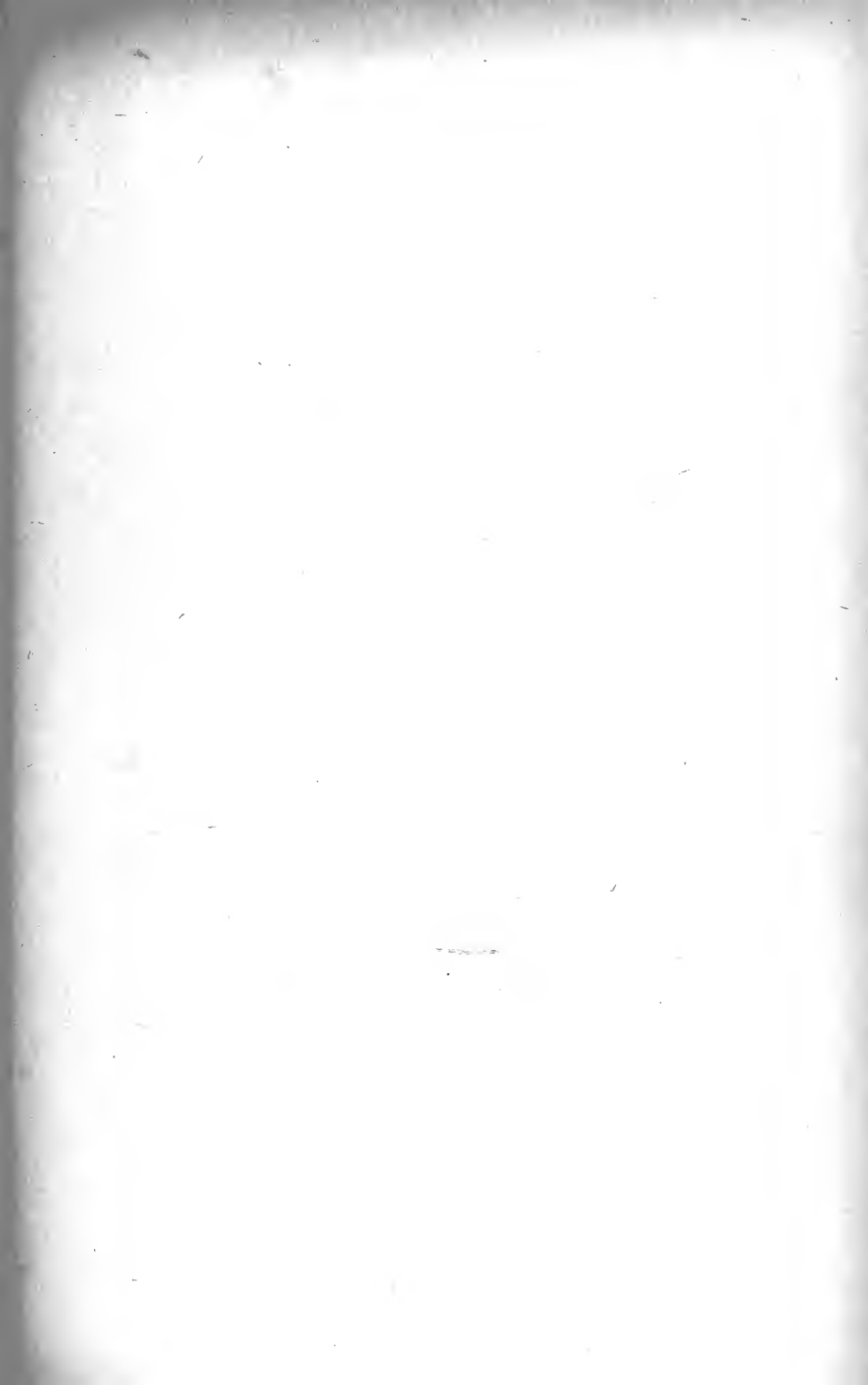
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BRENNAN, JOHN P.	Conimicut	FORD, EARLE F.	Providence
BRENNAN, WILLIAM B.	Providence	B.S., Providence College	
BRINDAMOUR, BERTRAND R.	Woonsocket	M.B.A., Northeastern University	
BRINDAMOUR, HENRI L.	West Warwick	FOSTER, CLINTON J.	Providence
BRODERICK, GEORGE H.	Providence	FRANKLIN, EARL L.	Cranston
B.S., R. I. State College		GABRIELSEN, ALF	Providence
BROMLEY, HERBERT	Seekonk, Mass.	GADSBY, HOWARD	Providence
BROOKE, DAVID R.	Riverside	GALIANO, CHARLES W.	Norwood
BROWN, DAVID S.	Pawtucket	GALVIN, JOSEPH T.	West Barrington
BROWNING, JOHN S., JR.	East Providence	GARDNER, CLIFFORD, JR.	South Attleboro, Mass.
BRUSCINI, ALBERT T.	Providence	GEORGE, HARRY	Providence
BUCKLEY, TIMOTHY F., JR.	Providence	GIFFORD, NORMAN L.	Westport, Mass.
BURROWS, ROBERT B.	Taunton, Mass.	GLOVER, DOROTHY M.	Cranston
BUXTON, EDWARD C.	Providence	GLOVER, STANLEY E.	Cranston
BYRNE, ROBERT A.	Providence	GOFF, FREDERICK H.	Applong
CARLISLE, SPENCER R.	Providence	GORDON, ARTHUR L.	Providence
CARR, WALTER E.	Providence	GRANDE, ALBERT	Providence
CABOT, DORIS R.	Pawtucket	GRAY, ARNOLD L.	Providence
CHARON, ROBERT L.	Manville	GREEN, ARNOLD J.	Providence
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CHISHOLM, GILMORE M.	Providence	HALEY, ROBERT E.	Providence
D.O., Philadelphia College of Osteopathy		HALL, ELIZABETH A.	Auburn
CIOLFI, ARMAND	Norwood	HALPIN, EDWARD J.	Fall River, Mass.
CLARK, RAYMOND G.	Saylesville	HAYS, LAFAYETTE A.	Cranston
CLIFFORD, JOHN G.	Providence	HEALD, J. ELLSWORTH	Central Falls
Ph.B., Brown University		HENRIKSON, HOWARD R.	Providence
COLAVECCHIO, JEAN	Providence	HEROUX, JOSEPH G.	Providence
COLE, ROBERT T.	Providence	HEVEY, WILLIAM R.	Riverside
COLEMAN, THOMAS	Providence	HILL, FREDERICK C.	Warwick
COLEMAN, WILLIAM B.	Pawtucket	HIRST, ALEX H.	Providence
CONSIDINE, WILLIAM P.	Cranston	HOFMANN, WALTER A.	Providence
COONEY, J. EDWARD	Central Falls	HOLBURN, WILLIAM F.	Pawtucket
COREY, HELEN E.	Edgewood		
COREY, JAMES B.	Pawtucket		
COSTELLO, ESTHER	Providence		

HOLLAND, OSCAR D.	Providence	PETERSON, HERMAN A.	Lincoln Par
HYNES, THOMAS	Providence	PETERSON, J. MILTON	Providence
ISSA, LOUIS	Central Falls	PETERSON, ROY A.	Providence
JACKSON, MARTHA G.	Providence	PETRUCCI, EDWARD	Johnston
JERAULD, ADRIAN E.	Providence	PETTELLA, DONATO E.	Providence
JAGER, RAYMOND E.	Providence	PHILLIPS, OLGA J.	Pawtucket
<i>B.S., Boston University</i>		PRICOLO, ALFRED R.	Providence
JOHNSON, CLINTON S.	Providence	PRIOR, EDWARD F.	Providence
<i>B.S., Brown University</i>		PROULX, GERARD C.	Central Falls
JOHNSON, FRANCIS S.	North Providence	PURCELL, WILLIAM J.	Providence
JOHNSON, G. RUSSELL	East Providence	RAHANIAN, CARRIE A.	Pawtucket
JOHNSON, HERBERT G.	Cranston	RAY, WILLIAM R.	Providence
JOHNSON, ROY V. J.	Cranston	RENIER, JOHN U.	Edgewood
JONES, JOHN E.	East Providence	<i>A.B., Bowdoin College</i>	
KANEHL, HOBART B.	Providence	REVKIN, ELLIOT	Providence
KEEFE, CLIFFORD W.	Providence	RHODES, GEORGE W.	Auburn
KEHOE, JOHN W.	Providence	RHODES, JOHN A.	Cranston
KELLEY, THOMAS L. F., JR.	Providence	RICHER, JOHN B.	Pawtucket
KELLY, ROBERT R.	Providence	RICHMOND, C. PRESTON	Providence
KENDRICK, WALTER L.	Providence	RIGBY, JACK	Greyston
KESSLER, SANFORD B.	Providence	RINEBOLT, LEWIS G.	Seekonk, Mass
KILGUSS, CHRISTIAN L.	Providence	ROBBINS, RUSSELL K.	Pawtucket
KING, JAMES M., JR.	Newport	ROGERS, FREDERIC C.	Providence
KULK, FRANK J.	Pawtucket	ROGERS, RICHARD M.	Pawtucket
KULLBERG, EDWIN T.	Cranston	ROSE, WILLIAM C.	Woonsocket
KULLBERG, RICHARD H. M.	Providence	ROUSSEAU, ARTHUR J.	Cranston
LANE, HAROLD L.	Warwick	ROWE, WILLIAM J. A.	Pontiac
<i>Ph.B., Brown University</i>		<i>B.S., R. I. State College</i>	
LAPOLLA, ARMAND R.	Providence	RUSSO, JAMES M.	Hope Valley
LARSON, AXEL G.	Providence	SCORPIO, ANTHONY	Providence
LETOURNEAU, GEORGE J.	Central Falls	SEABURY, JOHN, II	Newport
LEWIS, GRACE E.	Edgewood	SEARS, JOHN A.	Providence
LILLY, JOHN M.	Providence	SENERCHIA, PASCO R.	West Warwick
LINDSEY, DAVID H.	Fall River, Mass.	SHANNON, JOHN A.	Providence
<i>B.S., Harvard University</i>		SHARPE, ALBERT A.	Attleboro, Mass
LOCKWOOD, ARNOLD G.	Providence	SHEA, DONALD E.	Providence
LOPEZ, JANET J.	Providence	SHORR, JOSEPH	Woonsocket
LOSERT, ERWIN R.	New Bedford, Mass.	SHORT, KENNETH M.	Providence
LOWE, G. KINGDON	Providence	SILBERTHAU, HEINZ D.	Providence
MACDONALD, JAMES	East Providence	SIMONETTI, GERALD B.	Providence
MACDONALD, JOHN A.	Newport	SMITH, IRVING E.	Central Falls
MACINTOSH, AVIS S.	Providence	SMITH, WALTER E.	Pawtucket
MACKENZIE, GEORGE M.	Pawtucket	SORREIRO, ALBERT A.	Providence
MAHLER, DANIEL J.	East Providence	<i>LL.B., Northeastern University</i>	
MARCROFT, GEORGE E.	Edgewood	SOUTER, FRANK H.	Providence
MARTINS, JOHN S.	Warren	SPEAKMAN, DONALD C.	Riverside
MATHER, JOSEPH E., JR.	Pawtucket	SPEEL, J. KENTON	Cranston
MATTESON, ALTON R.	Auburn	ST. LOUIS, CLAIRE M.	Pawtucket
MCDADAMS, CLIFTON B.	Providence	STOCKBRIDGE, WILLIAM R.	Providence
MCBRIDE, FRANK I.	Providence	<i>B.S., Brown University</i>	
MCDONNELL, JAMES R.	Cranston	STOFFORD, C. WESLEY	Providence
MCLEOD, RALPH A.	Edgewood	STRASMICH, FRED N.	Providence
MERK, HUGO	Providence	SUTCLIFFE, GEORGE H.	Seekonk, Mass
MORAN, JOHN	West Warwick	SYMONDS, KAY	Providence
MORRIS, WILLIAM H.	North Scituate	TABER, THURSTON F.	Cranston
MORTON, MADISON H.	Providence	THOMASON, FRANCIS N.	Pawtucket
MUNDY, GEORGE J.	Slatersville	THOMPSON, HARRY A.	Oakland Beach
NASH, HENRY L.	Edgewood	TITMAS, DAVID C.	Central Falls
<i>B.A., Harvard University</i>		TOMADJOGLOU, ALEXANDER	Pawtucket
<i>B.S., Massachusetts Institute of Technology</i>		TORREGROSSA, MARYE N.	Providence
NELSON, BERTIL H.	Providence	TOWNSEND, JOHN	Providence
NEWTON, MALCOLM A.	Riverside	TOWNSEND, WILLIAM E.	Providence
NIXON, EDITH M.	Pawtucket	TUCKER, RANDALL W.	Edgewood
NOLAN, ANNA V.	Providence	TULCHIN, ABRAHAM	Fall River, Mass
NOWAKOWSKI, EDWARD S.	Central Falls	TURNER, EDWARD W.	Providence
NOYES, ROBERT L.	Edgewood	TURNER, WILLIAM	East Providence
NUCLO, EDWARD F.	Providence	VAUGHAN, LEON F.	Greenwood
O'LEARY, FRANK	North Providence	WAGNER, ELLWOOD L.	Cranston
OLSON, ELSIE M.	Cranston	WALTON, H. EDGAR	Providence
O'ROURKE, MICHAEL F.	North Attleboro	WEIR, GEORGE A., JR.	Providence
PARENT, A. EDGAR	Woonsocket	WHITE, GEORGE A.	Providence
PEARSON, N. HARVEY	Providence	WHITE, JOHN F.	Providence
PENICK, LYLE F.	Providence	WHITMAN, WALTER L.	Danielson, Conn.
PENKALA, JOSEPH E.	Warren	WICKLUND, MILTON E.	Providence
PENKALA, STANLEY F.	Warren	WILBUR, OLIVER S.	Glendale
		WILMARTH, LOUIS R.	Attleboro, Mass.
		ZORA, JOHN D.	Providence



NORTHEASTERN UNIVERSITY

DAY DIVISION

(ADMITS MEN ONLY)

The three colleges of the Day Division of Northeastern University are conducted on the co-operative plan. After the freshman year students may alternate their periods of study with periods of work in the employ of business or industrial concerns at ten-week intervals. Under this plan they gain valuable experience and earn a large part of their college expenses.

COLLEGE OF LIBERAL ARTS

Offers a broad program of college subjects serving as a foundation for the understanding of modern culture, social relations, and technical achievement. Varied opportunities available for vocational specialization. Degree: Bachelor of Science or Bachelor of Arts.

COLLEGE OF ENGINEERING

Offers curricula in Civil, Mechanical, (with Diesel, Air Conditioning, and Aeronautical options), Electrical, Chemical, Industrial Engineering, and Engineering Administration. Classroom study is supplemented by experiment and research in well-equipped laboratories. Degree: Bachelor of Science in the professional field of specialization.

COLLEGE OF BUSINESS ADMINISTRATION

Offers three curricula: Accounting, Banking and Finance, and Business Management. Each curriculum represents in itself a broad survey of business technique, differing from the others chiefly in emphasis. Degree: Bachelor of Science in Business Administration.

EVENING DIVISION

(ADMITS MEN AND WOMEN)

The schools of the Evening Division of Northeastern University offer classes for men and women at convenient evening hours. Students who are employed are thereby able to attend school and continue their regular employment.

SCHOOL OF LAW

Conducted in Boston: Divisions in Worcester and Springfield

Curriculum leading to the degree of Bachelor of Laws. Preparation for the practice of the law. Graduates eligible for the Massachusetts Bar Examinations. Case method of instruction. Graduate program leading to the degree of Master of Laws in Boston only. Also a pre-legal program offering the equivalent of two years of college work and preparing for admission to the School of Law.

SCHOOL OF BUSINESS

Conducted in Boston: Divisions in Worcester, Springfield, and Providence

Curricula in Accounting, Management, Law and Business, and Engineering and Business leading to the degree of Bachelor of Business Administration in specified fields. Preparation for C.P.A. Examinations. Shorter programs may be arranged.

For further information regarding any of the above schools, address

NORTHEASTERN UNIVERSITY

316 Huntington Ave., Boston, Mass. Tel.: KENmore 5800

WORCESTER, MASS.
766 Main St.
Tel.: Wor. 5-6101

SPRINGFIELD, MASS.
114 Chestnut St.
Tel.: Spr. 6-3681

PROVIDENCE, R. I.
160 Broad St.
Tel.: Gaspee 6357

NORTHEASTERN UNIVERSITY

COLLEGE OF LIBERAL ARTS

Pre-legal Program

OUTLINE OF EVENING COURSES



1938 : 1939

NORTHEASTERN UNIVERSITY
Boston - - Massachusetts

For further information or an interview address:

DAY PRE-LEGAL CURRICULUM

PROFESSOR MILTON J. SCHLAGENHAUF
Director of Admissions
Northeastern University
360 Huntington Avenue
Boston, Massachusetts
Tel.: KENmore 5800

EVENING PRE-LEGAL CURRICULUM

S. KENNETH SKOLFIELD, Director
Northeastern University
316 Huntington Avenue
Boston, Massachusetts
Tel.: KENmore 5800

After August 1, 1938 address:

47 Mt. Vernon Street
Boston, Massachusetts

NORTHEASTERN UNIVERSITY

Evening Pre-legal Curriculum

of the

College of Liberal Arts



1938 : 1939

NORTHEASTERN UNIVERSITY

Boston - - Massachusetts



CALENDAR, 1938-1939

Evening Program

(See catalogue, College of Liberal Arts, Day Division, for calendar of day sessions.)

First Term

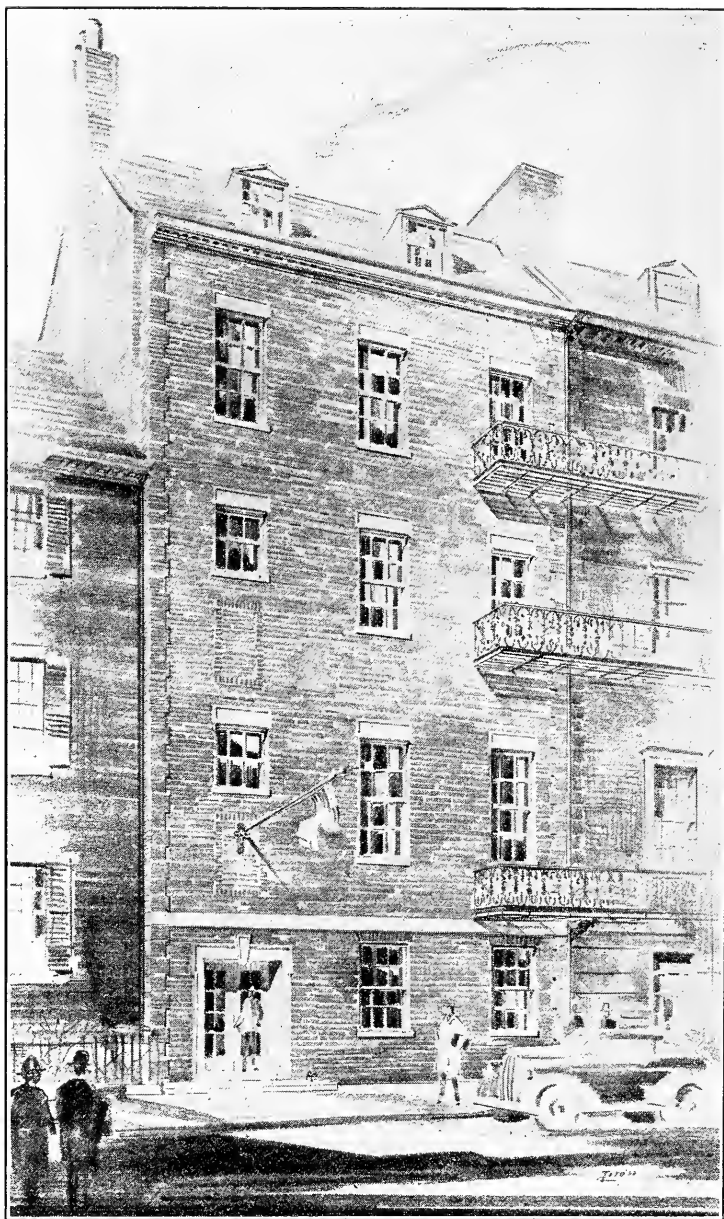
Registration	Sept. 1-10, 1938
Classes Begin	Thurs., Sept. 8, 1938
Columbus Day (Classes suspended)	Wed., Oct. 12, 1938
Armistice Day (Classes suspended)	Fri., Nov. 11, 1938
Thanksgiving Day (Classes suspended)	Thurs., Nov. 24, 1938
Christmas Recess Begins	Fri., Dec. 23, 1938
First Term Examinations	Jan. 3-6, 1939

Second Term

Classes Begin	Mon., Jan. 9, 1939
Washington's Birthday (Classes suspended)	Wed., Feb. 22, 1939
Second Term Examinations	Apr. 17-28, 1939

Third Term

Classes Begin	Mon., May 1, 1939
Memorial Day (Classes suspended)	Tues., May 30, 1939
Commencement (Classes suspended)	Mon., June 19, 1939
Independence Day (Classes suspended)	Tues., July 4, 1939
Third Term Examinations	July 10-14, 1939
Summer Recess	July 15-Sept. 5, 1939



Law School Building

THE NORTHEASTERN UNIVERSITY CORPORATION

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Chairman

FRANK LINCOLN RICHARDSON
Vice-Chairman

FRANK PALMER SPEARE
President of the University

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WILMAN EDWARD ADAMS	HENRY CAMPBELL JONES, JR.
ROGER AMORY	HALFDAN LEE
EARL D. BABST	EDWARD ABBOTT MACMASTER
ROBERT BALDWIN	JOHN RUSSELL MACOMBER
ARTHUR ATWOOD BALLANTINE	JOSEPH PATRICK MANNING
GEORGE LOUIS BARNES	HAROLD FRANCIS MASON
THOMAS PRINCE BEAL	HUGH DEAN McLELLAN
FARWELL GREGG BEMIS	IRVING EDWIN MOULTROP
PAUL CODMAN CABOT	CLARENCE LUCIAN NEWTON
WALTER CHANNING	OLAF OLSEN
WILLIAM CONVERSE CHICK	ANDREW JAMES PETERS
EVERETT AVERY CHURCHILL	GEORGE EDWIN PIERCE
PAUL FOSTER CLARK	ROGER PIERCE
SEARS B. CONDIT	MATTHEW POROSKY
ALBERT MORTON CREIGHTON	FREDERICK SANFORD PRATT
WILLIAM JAMES DAVIDSON	HARRY WENDELL PROUT
JAMES DEAN	SIDNEY RABINOVITZ
HENRY STURGIS DENNISON	JAMES LORIN RICHARDS
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MERRILL GRISWOLD	BAYARD TUCKERMAN, JR.
HENRY INGRAHAM HARRIMAN	ELIOT WADSWORTH
CHANDLER HOVEY	EDWIN SIBLEY WEBSTER
HOWARD MUNSON HUBBARD	

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WILFRED STANLEY LAKE, A.B., M.A., Ph.D.
Dean of Instruction

SYDNEY KENNETH SKOLFIELD, A.B.
Director

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IN THE
COLLEGE OF LIBERAL ARTS

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Res. 122 Downer Ave., Hingham

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Res. 60 Pinckney St., Boston

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Assistant Professor of Biology
Res. 8 Cumberland St., Boston

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Professor of Physical Education
Res. 19 Hardy Ave., Watertown

NORRIS WHITFIELD POTTER, JR., A.B., M.A.
Assistant Professor of History
Res. 108 Jersey St., Boston

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Res. 31 Matchett St., Brighton

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Professor of Chemistry
Res. 316 Huntington Ave., Boston

WILLIAM CROMBIE WHITE, S.B., Ed.M.
Associate Professor of Education
Res. 30 Summit Rd., Wellesley

THE COLLEGE OF LIBERAL ARTS

GENERAL STATEMENT

THE College of Liberal Arts in the Day Division of Northeastern University has a faculty of full-time teachers and administrative officers and offers instruction in the following academic departments: Biology, Chemistry, Economics, Education, English, French, German, Geology, Government, History, Graphic Arts, Mathematics, Physics, Psychology, Physical Education, and Sociology.

A detailed description of curricula will be found in the catalogue of the Day Division. This pamphlet pertains only to those courses offered by the College of Liberal Arts in its Evening Pre-legal Curriculum.

PRE-LEGAL PROGRAM

Statement of Purpose

The purpose of the Evening Pre-legal Curriculum of the College of Liberal Arts is to give those students who wish to begin their law studies upon the completion of the required two years of college work a course of study particularly designed to qualify them for admission to the School of Law and to furnish, in part at least, that background of learning and culture so necessary to enable the lawyer to meet the new developments of our modern world.

A broad general education is the surest guarantee of a good moral and intellectual equipment. The action of the American Bar Association in insisting on two years of study in college as the minimum requirement for admission to law school is based on the character and intellectual attainments inherent in collegiate training and on the belief that since the law enters into so many fields of learning and culture the value of such topics as history and literature has become increasingly necessary to a useful and public spirited professional life.

Through its Evening Pre-legal Curriculum, the College of Liberal Arts of Northeastern University seeks to serve two groups of pre-legal students: First, those employed men and women who have completed their high school training and desire to undertake the evening program of pre-professional study in preparation for their legal study, and, second, those employed men and women who have completed a portion of their college work and now seek, by additional pre-legal study, to qualify for admission to the School of Law.

Location

The day program of the College of Liberal Arts will be conducted in the new University Building located at 360 Huntington Avenue.

The administrative offices and classes of the Evening Pre-legal Curriculum will be located in the new Law School Building at 47 Mt. Vernon Street within a few minutes' walk of the State House, of the Park Street

subway, and of the North and South Stations. The School of Law building has excellent classroom facilities, adequate library areas, administrative and instructional offices, a branch of the University bookstore, and opportunities are provided for study and for conferences with the faculty members outside the classroom.

EVENING PRE-LEGAL CURRICULUM

The Evening Pre-legal Curriculum is built around the needs of employed men and women and those high school graduates who are unable to attend a day college and must obtain their preparation in the evening. The evening pre-legal course meets the same academic standards and includes the same number of semester hours' credit as that offered in the day program. The courses of study, however, have been chosen to meet the needs of evening students. Class attendance three nights a week, forty weeks each year, for three years is needed to cover the evening pre-legal requirements.

The pre-legal curriculum lays much emphasis upon the social sciences, English, and history, because of the value of a thorough grounding in these fields for the prospective student of law.

Admission Requirements

Admission requirements are the same for both Day and Evening curricula in the College of Liberal Arts, except that both men and women are admitted to the Evening program, while the Day program is restricted to men only.

Applicants for admission to the College of Liberal Arts in the pre-legal curricula must qualify by *one* of the following methods:

1. Graduation from an approved course of study in an accredited secondary school, including prescribed subjects listed below.
2. Completion of fifteen acceptable secondary school units with a degree of proficiency satisfactory to the Department of Admissions.
3. Examinations. (Certificate of entrance examinations passed for admission to recognized colleges and technical schools may be accepted.)

Prescribed Subjects for Admission

	Units
English	3
Foreign Language or	3
Mathematics	2
Social Studies or	2
Natural Science	1
*Electives	to make up a total of 15 units.

*Not less than four of the "electives" must be in one or more of the following academic branches: Languages, Natural Science, Mathematics, Social Sciences, History.

Advanced Standing

Students transferring from approved colleges will be admitted to advanced standing provided their records warrant it. Whenever a student enters with advanced standing and later proves to have inadequate preparation in any of his prerequisite subjects, the faculty reserves the right to require the student to make up such deficiencies.

Applicants seeking advanced standing should arrange to have transcripts of their previous college records forwarded with their initial inquiry.

GENERAL INFORMATION

These regulations apply only to the Evening Pre-legal Curriculum. Regulations pertaining to the Day Pre-legal Curriculum will be found in the Day Division Catalogue of the College of Liberal Arts.

Application for Admission

Each applicant for admission is required to file an application blank setting forth his previous education and the names of persons to whom references may be made in regard to his character and previous training.

The last page of this catalogue is in the form of an application blank. It should be filled out in ink and forwarded to the Director of the Pre-legal Division of the College of Liberal Arts, Northeastern University, 316 Huntington Avenue, Boston, Massachusetts.

Applicants are urged to visit the school for a personal interview if it possible for them to do so. Upon receipt of the application, the college at once obtains the secondary school records, and checks the references, and when all the data have been assembled informs the applicant as to his eligibility for admission.

Applications should be filed preferably before the registration period, thus allowing time to determine eligibility for admission and to adjust any schedule problems before the opening of the College.

Registration

The filing of the application and determination of eligibility for admission does not constitute registration. All students are required to register at the college and arrange for the payment of their tuition during the registration period. (See calendar, p. 5)

Attendance and Examinations

Attendance is required of all students at recitations and lectures continuously throughout the academic year.

Regular final examinations are held at the close of each term.

Grades

The work of each student shall be graded upon examinations, according to the following scale:

A	Superior
B	Above average
C	Average
D	Lowest passing grade
E	Unsatisfactory*
F	Failure**

No examination Inc. Incomplete

*An unsatisfactory grade may be made up by taking the make-up examination and obtaining a satisfactory grade.

**A failure may be made up, but only by repeating the course in its entirety and obtaining a satisfactory grade.

Dean's List

The Dean's List, issued at the end of each term, contains the names of all students who have an honor grade average in all subjects during the preceding term.

TUITION AND FEES

Application Fee

An application fee of \$5.00 is required when the application for admission is filed. This fee is not refundable.

Tuition

The annual tuition fee in the Evening Pre-legal Curriculum is \$160 for students carrying a full-year program of twenty-one semester hours.

Tuition is payable in advance in three installments on the following dates: \$60 at the opening of school in September; \$60 at the beginning of the second term in January; and \$40 at the beginning of the third term in April.

Students enrolled for less than a full-year program are charged on the semester-hour basis of \$8.00 per semester hour.

Late Payment Fee

A \$2.00 late payment fee is added to all tuition bills which are not paid in full when due. Students who cannot meet their tuition payments should arrange with the Bursar before the due date for the late payment of their tuition.

Examination Fees

A fee of \$2.00 is charged for each condition examination taken by a student.

Payments

Checks or money orders should be drawn payable to Northeastern University.

Withdrawals and Refunds

In the event a student is obliged to withdraw from the school for causes deemed adequate by the committee on Administration, the unused tuition will be refunded.

PRE-LEGAL CURRICULUM FOR EVENING STUDENTS

First Year

<i>First Term (15 Weeks)</i>		<i>S. H.</i>	<i>Second Term (15 Weeks)</i>		<i>S. H.</i>
L	1-2 English Com.	3	L	1-2 English Comp.	3
HS	1-2 Hist. Civilization	3	HS	1-2 Hist. Civilization	3
SS	3-4 Intro. Social Sci.	2	SS	3-4 Intro. Social Sci.	2
		—			—
		8			8

<i>Third Term (10 Weeks)</i>		<i>S. H.</i>
L	3 Public Speaking	2
SS	1 Intro. Philosophy	3
		—
		5

Second Year

<i>First Term (15 Weeks)</i>		<i>S. H.</i>	<i>Second Term (15 Weeks)</i>		<i>S. H.</i>
HS	3-4 English and Am. Constitution. Hist.	3	HS	3-4 English and Am. Constitution. Hist.	3
SS	5-6 Prins. of Econ.	3	SS	5-6 Prins. of Econ.	3
L	5-6 English Literature	2	L	5-6 English Literature	2
		—			—
		8			8

<i>Third Term (10 Weeks)</i>		<i>S. H.</i>
HS	3-4 English and Am. Constitution. Hist.	2
SS	7 Int. Ec. Relations	3
		—
		5

Third Year

<i>First Term (15 Weeks)</i>		<i>S. H.</i>	<i>Second Term (15 Weeks)</i>		<i>S. H.</i>
SS	9-10 General Psychology	3	SS	9-10 General Psychology	3
SS	11-12 Prins. Sociology	3	SS	11-12 Prins. Sociology	3
SS	17-18 Am. Govt. and Pol.	2	SS	17-18 Am. Govt. and Pol.	2
		—			—
		8			8

<i>Third Term (10 Weeks)</i>		<i>S. H.</i>
SS	15 Social Ethics	3
SS	13 Criminology	2
		—
		5

The evening pre-legal curriculum requires at least three years to complete; some students will prefer to spread their work over a longer period. The three-year program consists of two fifteen-week terms and a ten-week term each year, or a total of one hundred and twenty weeks of school attendance. Classes are held each week from 6.30 P.M. to 9.30 P.M. on two evenings and from 7.00 P.M. to 9.00 P.M. on the third evening. The customary amount of outside preparation is required in all courses, which means from twelve to fifteen hours a week of home study.

This three-year evening pre-legal program comprises sixty-three semester hours of academic work, and is equivalent to one half of the requirement for the Bachelor's degree in the College of Liberal Arts.

REQUIREMENTS FOR THE A.B. OR B.S. DEGREES

A student who completes the evening pre-legal curriculum may become a candidate for the bachelor's degree in the College of Liberal Arts by completing an additional sixty-two semester hours of work and by meeting major, minor, and language requirements in the Day Division.

DESCRIPTION OF COURSES IN THE EVENING CURRICULUM

L 1-2 English Composition

This is a course in the fundamental principles of composition, aiming to improve the student's ability to write effectively. Sentence structure, paragraph development, organization of material, and similar problems are taken up and the student is given much practice through required theme writing. Considerable reading in current periodical literature forms a part of the course. Some work in oral English is included.

First year, first and second terms

6 semester hour credits

L 3 Public Speaking

This course offers practical training in the preparation and presentation of the various types of speeches. The instruction will be planned to eliminate defects of voice, posture, etc., and to develop in the student an ability to speak easily, naturally, and forcefully.

First year, third term

2 semester hour credits

L 5-6 English Literature

A survey of English literature. After a brief study of the social and political background of each literary period, the writing of the period is considered, and the more important writers are studied and read in detail. The purpose of the course is to give the student an appreciation of English literature as a whole, and an intimate knowledge of its major figures.

Second year, first and second terms

4 semester hour credits

HS 1-2 History of Civilization

A study of the effect of geographical environment, race, and inherited cultures upon human societies, and of the origin and development of institutions. Beginning with an outline of the origin of man, palaeolithic and neolithic men and cultures, the transition to copper and bronze cultures, the development of writing and various alphabets, the course proceeds to a consideration of the early civilizations of Asia and Egypt. Other topics considered are prehistoric Greece, the Minoan civilization of Crete, Lydia and the later civilizations of western Asia, and the conflict of east against west. The course culminates with a discussion of Athenian civilization, the clash of Athens and Sparta, the rise of imperialism and the spread of Hellenism, the rise of Rome, social and religious influences of the east upon Greek and Roman thought, and the spread of Christianity.

First year, first and second terms

6 semester hour credits

HS 3-4 English and American Constitutional History

The first semester of this course is devoted to a consideration of the English constitution and of the common law; local government vs. central government; the origin and growth of Parliament; the development of the British cabinet system; and a comprehensive study of statutes and documents.

In the second term a study is made of the historical development of the United States Constitution with particular emphasis on its progressive adaptation to a changing social and economic order

Second year, first, second, and third terms

8 semester hour credits

SS 1 Introduction to Philosophy

This introductory course combines the historical and systematic approaches to the subject. The historical treatment includes a survey of the chief philosophers and the development of basic philosophical ideas. The systematic treatment presents the several schools of philosophy, such as realism, materialism, idealism, and the like. The place of philosophy is considered in its relation to ethics, religion, and the social sciences. The course seeks not only to acquaint the student with facts about philosophy but to enable him to think philosophically.

First year, third term

3 semester hour credits

SS 3-4 Introduction to the Social Sciences

After some preliminary consideration of the European background of contemporary American culture this course undertakes a survey of the development of economic, social, and political institutions in the U. S. A. Particular attention is paid to the process of transformation by which changes occurred in order to provide a background for understanding the major social problems of the present day.

First year, first and second terms

4 semester hour credits

SS 5-6 Principles of Economics

A thorough grounding in the fundamental principles and laws of economics is the aim of this basic course. The main topics include: the nature of production, the nature and importance of wants, the relation of money and prices, the process of exchange, and the nature of international trade.

A careful analysis is made of the determination of price under conditions of competition and monopoly, and of the distribution of wealth and income in the form of wages, economic rent, interest and profits.

Second year, first and second terms

6 semester hour credits

SS 7 International Economic Relations

A careful examination of the important principles of international trade and finance precedes a critical survey of the international commercial policies of modern nations, with special reference to the United States. Such broader problems as the international control of raw materials, international cartels and the economic activities of the League of Nations are considered.

Second year, third term

3 semester hour credits

SS 9-10 General Psychology

An elementary survey of the psychology of individual differences including personality differences, together with a presentation of some of the practical applications of the findings of differential psychology. This is followed by an introduction to general experimental psychology. The topics considered include learning, thought, memory, perception, and sensation.

Third year, first and second terms

6 semester hour credits

SS 11-12 Principles of Sociology

Facts and principles basic to a general knowledge of the field of sociology are presented. The origins, forms, and forces of human associations are discussed. Consideration is given the several leading schools of sociological thought. The course is designed to meet the needs of the student who desires only an elementary survey of the subject, as well as the student who plans to take advanced courses in the field.

Third year, first and second terms

6 semester hour credits

SS 13 Criminology

Who are criminals and what makes them such are the first questions which this course approaches. After a study of the nature and causes of crime, instruction is then given concerning the history, types, and theories of criminology. The classical and positive schools of the treatment of crime are compared with more modern points of view. Delinquency areas and crime zones are surveyed. What bearing mental disease and defectiveness, poverty, broken homes, and racial background have upon crime is examined; in fact, this course emphasizes at all times the fact that crime is not an isolated phenomenon but is closely related to many other social problems.

Third year, third term

2 semester hour credits

SS 15 Principles of Social Ethics

This course deals with the nature of right and wrong conduct with reference to moral problems in individual and social life. The beginnings and growth of morality will be traced from the level of custom to the level of conscience and then to the level of reflective thought. The development of moral judgment and of ethical standards will be considered.

Third year, third term

3 semester hour credits

SS 17-18 American Government and Politics

The study of our National Government with respect to its organization and function; its powers and limitations under the Constitution; its legislative, administrative and judicial machinery under the party system of government and bureaucracy.

In the second term a more careful study of the relationships of our federal, state and municipal governments, including an analysis and comparison of the various state governments and types of municipal government with respect to state and local agencies for carrying out the executive, legislative and judicial functions of government in a democratic country.

Third year, first and second terms

4 semester hour credits

Northeastern University College of Liberal Arts

Boston, Mass.

Application
Received by

APPLICATION FOR ADMISSION

.....
Date

A fee of five dollars must accompany this application. Make checks, money orders, or drafts payable to Northeastern University. (This fee is not refundable.)

To the Director:

Date.....193..

I (Print name in full).....

Last

First

Middle

hereby apply for admission to the College of Liberal Arts. I wish to enter the Evening Division of the Pre-legal Curriculum.

Present mail address.....Street, City.....State.....

Home address.....Street, City.....State.....

Place of birth.....Date of Birth.....Age....yrs....mos.

Race.....Religion.....

Are you a citizen of the United States?.....

Name and address of parent or guardian if under 21 years of age

Graduate of.....High School, Year.....

Location of High School.....

Other High Schools you have attended.....

If not a graduate, state the years of attendance and why you left.....

Have you ever applied for admission to any other college or university?

Yes. ☐ No. ☐ If so, give name of college or university and year of application.

Do you expect advanced standing credit in the College of Liberal Arts?

Yes. ☐ No. ☐ If so, give name of college and years in which you were in attendance. Years.

References:—Name two persons who are not students or relatives:

Name.

Address. Occupation.

Name.

Address. Occupation.

If you have been a student in any other school of the Northeastern University system give name of school and years in which you were in attendance.

State how you first learned of Northeastern University.

.....

.....

All statements made by me in this application are true and complete to the best of my knowledge and belief.

Signed.
(Usual Signature)

NORTHEASTERN UNIVERSITY

College of Liberal Arts

Offers a broad program of college subjects serving as a foundation or the understanding of modern culture, social relations, and technical achievement. Varied opportunities available for vocational specialization. Degree: Bachelor of Science or Bachelor of Arts.

College of Engineering

Offers curricula in Civil, Mechanical (with Diesel, Air-Conditioning, and Aeronautical options), Electrical, Chemical, Industrial Engineering, and Engineering Administration. Class room study is supplemented by experiment and research in well-equipped laboratories. Degree: Bachelor of Science in the professional field of specialization.

College of Business Administration

Offers three curricula: Accounting, Banking and Finance, and Business Management. Each curriculum represents in itself a broad survey of business technique, differing from the others chiefly in emphasis. Degree: Bachelor of Science in Business Administration.

School of Law

Offers day and evening undergraduate programs admitting those who present a minimum of two years of college work, each program leading to the degree of Bachelor of Laws. Also graduate program in the evening leading to the degree of Master of Laws. Co-educational.

School of Business

Offers curricula through evening classes in Accounting, Management, Law and Business, and Engineering and Business leading to the degree of Bachelor of Business Administration in specified fields. Preparation for C. P. A. Examinations. Shorter programs may be arranged. Co-educational.

Pre-Legal Program

Offers in connection with the College of Liberal Arts special day and evening programs providing the equivalent of two years of college work and preparing for admission to the undergraduate programs of the School of Law. Co-educational in the evening.

The Colleges of Liberal Arts, Engineering and Business Administration offer day programs for men only and are conducted on the co-operative plan. After the freshman year students may alternate their periods of study with periods of work in the employ of business or industrial concerns at ten-week intervals. Under this plan they gain valuable experience and earn a large part of their college expenses.

In addition to the above schools the University has affiliated with it and conducts: the Huntington Day School for Boys, which prepares for admission to all leading colleges and universities; the Lincoln Technical Institute offering, through evening classes, courses of junior college grade in various fields of engineering; and the Lincoln Preparatory School, an evening school preparing for college entrance and offering other standard high school programs.

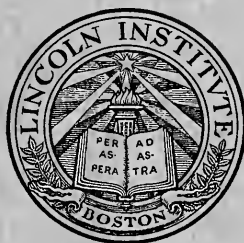
For further information regarding any of the above schools, address

NORTHEASTERN UNIVERSITY

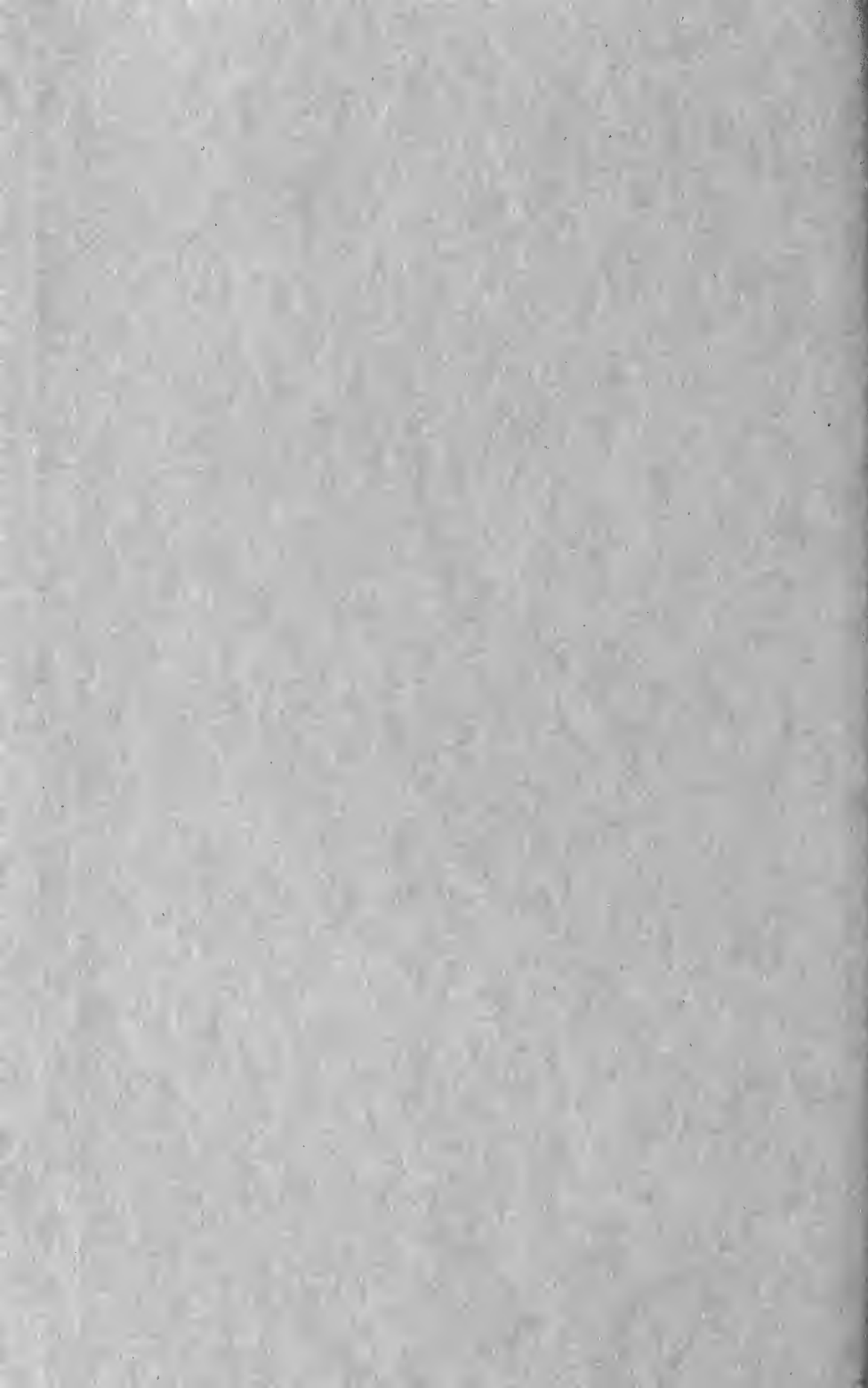
360 Huntington Avenue, Boston, Massachusetts

Telephone: KENmore 5800

LINCOLN TECHNICAL INSTITUTE



EVENING COURSES IN ENGINEERING



Lincoln Technical Institute

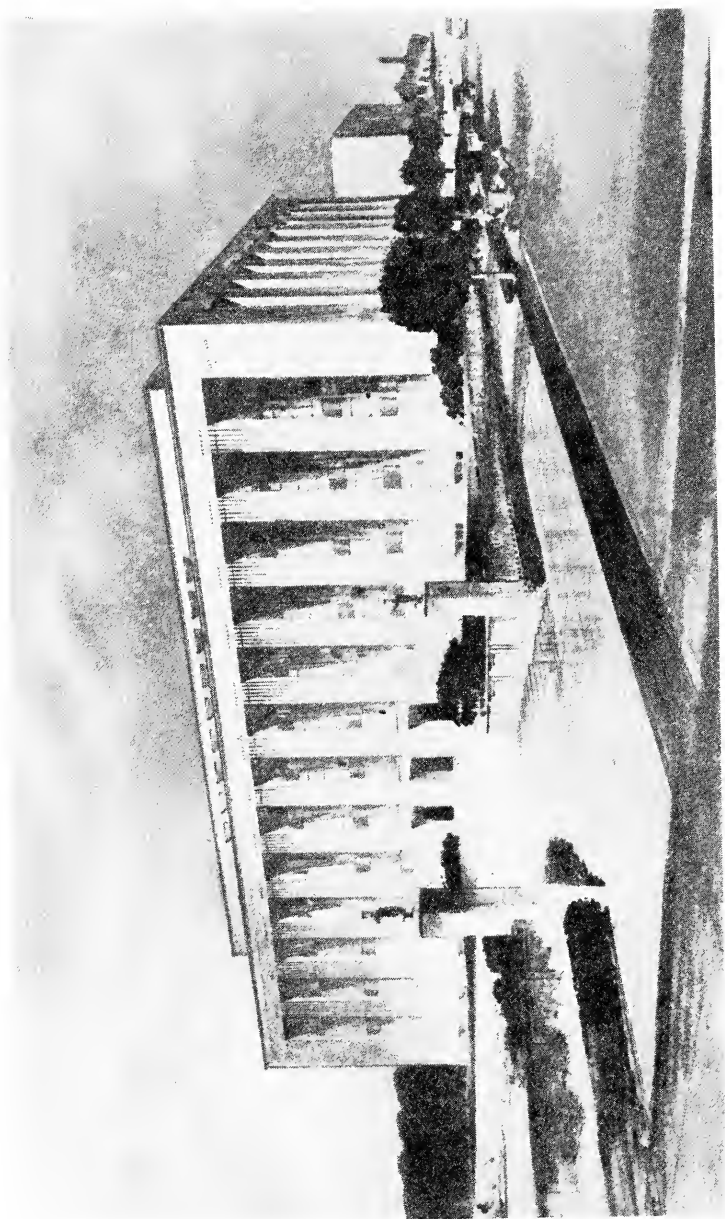
An Evening Junior College
of
ENGINEERING

(Affiliated with Northeastern University)



1938-1939

The Lincoln Technical Institute, working in conjunction with Northeastern University School of Business, offers courses carrying credit towards the Degree of Bachelor of Business Administration in Engineering and Business awarded by Northeastern University.



NORTHEASTERN UNIVERSITY WEST BUILDING

Where many of the classes of the Lincoln Technical Institute will be held beginning September, 1938

CALENDAR

1938

Registration Period	SEPTEMBER 6-19
Advanced Standing and Condition Examinations	SEPTEMBER 16
Classes Begin	SEPTEMBER 19
Legal Holiday. No Classes	OCTOBER 12
Legal Holiday. No Classes	NOVEMBER 11
Legal Holiday. No Classes	NOVEMBER 24
Final Class Session before Christmas Recess	DECEMBER 16

1939

First Class Session after Christmas Recess	JANUARY 3
Division B Classes Begin	JANUARY 10
Legal Holiday. No Classes	FEBRUARY 22
Legal Holiday. No Classes	APRIL 19
Legal Holiday. No Classes	MAY 30
Closing Date of Classes	JUNE 2
Commencement	JUNE 15

OFFICE HOURS

AUGUST 15, 1938 — JUNE 16, 1939

Week days, except Saturday	9 a.m. till 9 p.m.
Saturday	9 a.m. till 1 p.m.

JUNE 19, 1939 — AUGUST 14, 1939

Monday, Wednesday and Thursday	9 a.m. till 4 p.m.
Tuesday and Friday	{ 9 a.m. till 4 p.m.
	{ 6 p.m. till 8 p.m.
Saturday	9 a.m. till 12 m.

INTERVIEWS

Prospective students, or those desiring advice or guidance with regard to any part of the school work or curricula, are offered personal interviews with the Dean or his assistants. No enquirer should hesitate to ask for an appointment as, in the long run, time is saved during the school year by having the whole educational problem discussed before the opening of the school.

LINCOLN TECHNICAL INSTITUTE

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JAMES WALLACE LEES, A.M.

Dean

WILLIAM GREENE WILKINSON, A.B., Ed.M.

Assistant to the Dean

FACULTY

WILLIAM THURLOW ALEXANDER

Appointed 1927

B.M.E. Northeastern University, 1926; B.S. Northeastern University, 1931; M.A. Boston University, 1935; Member of American Society of Mechanical Engineers; Member of Society for Promotion of Engineering Education; Assistant Professor, Industrial Engineering, Northeastern University, 1926—.

Mechanism, Machine Design

CHARLES O. BAIRD, JR.

Appointed 1936

B.S. Northeastern University, 1934; Instructor, Northeastern Polytechnic School, 1922–1931; Instructor and Assistant Professor, Civil Engineering, Northeastern University, 1922—.

WALTER ALFRED BALDWIN

Appointed 1931

A.B. Ohio Wesleyan University, 1906; graduate study University of Chicago and Harvard University; Head, Department of Mathematics, Chillicothe High School, Ohio, 1906–8; Head, Department of Mathematics, Mansfield High School, Ohio, 1908–10; Head, Science Department, Huntington School for Boys, Boston, 1912–14; Instructor in Physics and Chemistry, Lincoln Preparatory School, 1910—.

Chemistry

ALLEN DOUGLAS BLISS

Appointed 1937

A.B. Middlebury College, 1923; A.M., Ph.D., Harvard University, 1928, 1934; 1927— Assistant Editor of the Journal of the American Chemical Society; 1935–37 Instructor in Chemistry, Northeastern University; 1932— Research Assistant in Chemistry, Harvard University.

Analytical Chemistry

HENRY BRASK

Appointed 1928

B.C.E. Northeastern University, 1923; Member of The Boston Society of Civil Engineers; with Aspinwall & Lincoln, Civil Engineers, 1920–1922; Boston & Albany R.R., 1922–1923; Engineer with Burtis Brown, Engineers, 1923–1934; Engineer with George P. Carver Engineering Co., 1934—.

Structural Drawing and Design

LAURENCE FULLER CLEVELAND

Appointed 1931

B.S. Worcester Polytechnic Institute, 1929; M.S. Massachusetts Institute of Technology, 1935; Assistant Professor in the Department of Electrical Engineering, Member of the Society for the Promotion of Engineering Education, Northeastern University, 1929—.

Engineering Drawing

OTIS F. CUSHMAN

Appointed 1937

B.S. University of New Hampshire, 1932; M.S. University of New Hampshire, 1934; Research Assistant, University of New Hampshire, 1935–36; Instructor in Drawing, Northeastern University, 1936—.

Engineering Drawing

ALEXANDER BARRETT DAYTZ

Appointed 1931

B.S. Massachusetts Institute of Technology, 1928; Phoenix Bridge Co., 1928–1929; Bridge Designer, Boston and Maine Railroad Company, 1929–30; Assistant Structural Engineer, Boston Transit Department, 1930–32; Assistant at Massa-

chusetts Institute of Technology, 1932; Massachusetts Metropolitan District Water Supply Commission, 1933-35; Engineer for Metropolitan Sewerage Division, 1936; Practicing Engineer, 1936—.

Structures, Concrete, Concrete Design

HARRY EVERETT DOW

Appointed 1928

Calculating Engineer, New London Ship and Engine Company; Technical Assistant, Boston Edison Company; Engineer in the Malden & Melrose Gas Light Company.

Blueprint Reading and Estimating

ELMER HASKELL EVERETT

Appointed 1935

B.S. Northeastern University, 1934; Graduate Study, Massachusetts Institute of Technology, 1935; M.S. Harvard, 1936; Refrigeration Engineer, Boston Ice Company, 1933-35; Compressor Department, Ingersoll-Rand Company, 1936; Turbine Department, General Electric Company, 1936; Assistant to Research Engineer, Birdseye Laboratories, 1937—.

Mathematics and Machine Drawing

WALTER S. FROST

Appointed 1937

B.S. Tufts College, 1912; Ph.D. Cornell University, 1923; Instructor, Cornell University, 1916-1919; Instructor, West Virginia University, 1920; Assistant Professor, University of New Hampshire, 1920-26; Chemist, Burnham Soluble Iodine Company, 1929—.

Industrial Chemistry

ROYAL MERRILL FRYE

Appointed 1930

A.B. Boston University, 1911; A.M. Boston University, 1912; Ph.D. Boston University, 1934; Instructor in Boston University, 1913-16; Instructor in Department of Physics, Massachusetts Institute of Technology, 1916-31; Instructor in Physics, Worcester Polytechnic Institute, 1926-27; Assistant Professor of Physics, Boston University Graduate School, 1931—.

Practical Physics, A. C. Machines, Advanced Mathematics

HERBERT WILLARD HATCH

Appointed 1930

B.S. Massachusetts Institute of Technology; Teacher at Franklin Union, 1923-26; Designer with Board of Education, Rochester, 1921-22; Stone and Webster, 1922-25; Cram and Ferguson, 1925-29.

Architectural Drawing and Design

ROBERT EDGAR HODGDON

Appointed 1927

B.S. University of New Hampshire; M.S. Massachusetts Institute of Technology; Teacher in Mechanical Arts Department, Dover High School, New Hampshire, 1919-20; Teacher of Physics and Mathematics, Concord High School, New Hampshire, 1920-21; Training Assistant United States Veterans Bureau, 1921-22; Instructor in Physics Department of Massachusetts Institute of Technology, 1922-33; Rindge Technical School, 1933—.

Engineering Drawing, Practical Physics, Advanced Mathematics, Electricity

HAROLD G. JENKS

Appointed 1937

B.S. Massachusetts Institute of Technology, 1912; Superintendent, Transmission Line, Eastern Massachusetts Electric Company, 1917-1924; Assistant-Superintendent, Cambridge Electric Light Company, 1924-29; New England Sales Representative, R. G. Haskins Company, Chicago, 1931-35; Distribution Engineer, New England Gas & Electric Company, Engineering Department, 1937—.

HERBERT G. LANG

Appointed 1936

B.S. Northeastern University, 1934; Draftsman, Mason-Neilan Regulator Company, 1934—.

Engineering Drawing

JOHN ROBERT LEIGHTON

Appointed 1915

B.C.E. Northeastern University, 1914; Instructor, Northeastern University, 1914-17; Instructor, Northeastern Polytechnic School, 1915-27; Instructor, Lincoln Technical Institute, 1927—.

Applied Mechanics, Strength of Materials

ROBERT E. MADSEN

Appointed 1933

B.M.E. Northeastern University, 1931; B.S. Northeastern University, 1933; Instructor, Northeastern University, 1931-34; Instructor, Pond Street High School, Ayer, 1934-35; Maynard High School, 1935-36; Bedford Junior High School, 1936—.

Engineering Mathematics

WALDEMAR STANWOOD MCGUIRE

Appointed 1936

S.B. Massachusetts Institute of Technology, 1928; M.A. Boston University, 1930; Instructor at Tufts College, 1920-21; Instructor Rhode Island State College, 1921-24; Northeastern University, Professor of Chemistry, 1924—.

Analytical Chemistry

COLIN H. MCINTOSH

Appointed 1936

B.A. Williams College, 1930; Officer's Training Course, Massachusetts National Guard Air Corps, 1930-31; Flying Cadet, United States Air Corps Training School, San Antonio, Texas, 1931-32; Instructor in Science, Beebe Junior High School, Malden, 1935—; Aircraft Dispatcher, Boston & Maine, Central Vermont Airways, 1936—.

Aeronautics

GEORGE AXEL PETERSON

Appointed 1936

B.S. Massachusetts Institute of Technology, 1935; Design Engineer, General Heat & Appliance Company, 1935—.

Air Conditioning

CHESTER FLINT PROTHERO

Appointed 1926

Ed.M. Harvard University, 1931; Instructor, Powder Point School, Duxbury, Mass., 1922-25; Instructor, Tabor Academy, Marion, Mass., 1925-26; Instructor, Allen School, West Newton, Mass., 1926-27; Instructor, Governor Dummer Academy, South Byfield, Mass., 1927-30; Head of Science Department and Assistant to the Headmaster, Beaver Country Day School, Chestnut Hill, Mass., 1930—.

Mathematics

CHARLES EDWARD RICE

Appointed 1936

B.S. Northeastern University, 1935; Laboratory Assistant, Northeastern University, 1932-35; General Radio Company, 1935—.

Electrical Laboratory

ALBERT E. SANDERSON, JR.

Appointed 1936

B.C.E. Northeastern University, 1926; Bethlehem Steel Company, 1927-30; Boston Bridge Works, 1930-34.

Engineering Drawing

JOHN DAVID SHORE

Appointed 1926

Lieut., U. S. N. R.; S.B. Massachusetts Institute of Technology, 1912; Architectural Draftsman, 1916-21; Instructor, Franklin Union, Boston, 1921-24; Head of Department of Mechanical Drawing, United States Vocational School, Portland, Maine, 1924-25; Instructor in Mathematics, English High School, 1925—; University Extension Work: Industrial Mathematics and Blue Print Reading, Navy Yard, Boston, and Industrial Mathematics and Slide Rule, Massachusetts Institute of Technology, Cambridge, 1937-1938.

Engineering Mathematics

FREDERICK ARLINGTON STEARNS

Appointed 1921

B.S. 1917, M.S. 1934, Massachusetts Institute of Technology; Member of American Society of Mechanical Engineers; Member of Society for Promotion of Engineering Education; United States Army, 1917-19; Instructor, Massachusetts Institute of Technology, 1920; Professor in the Department of Mechanical Engineering, Northeastern University, 1920—.

Heat Engineering

ALBERT E. WHITTAKER

Appointed 1936

B.M.E. Northeastern University, 1924; Ed.M. Harvard University, 1932; B.S. Northeastern University, 1933; Graduate Study, Boston University, 1934—; Assistant Professor, Mathematics, Northeastern University, 1924—.

Engineering Mathematics

ALFRED JAMES WISE

Appointed 1936

B.S. Northeastern University, 1936; Assistant Instructor, Northeastern University, 1936—.

Electrical Laboratory

SAVERIO ZUFFANTI

Appointed 1934

B.Ch.E. Northeastern University, 1930; M.A. Boston University, 1932; B.S. Northeastern University, 1934; Assistant Professor of Chemistry, Northeastern University, 1930—.

Analytical Chemistry

EDNA M. EDISON, *Secretary*

HELEN E. HILDRETH, *Bookkeeper*

PRISCILLA C. HILL, *Recorder*

THE LINCOLN SCHOOLS

Historical Statement

THE Lincoln Schools, conducted by and affiliated with Northeastern University, include the Lincoln Technical Institute and the Lincoln Preparatory School. These schools offer the non-degree-granting work conducted by Northeastern University.

All classes in the Lincoln Schools are held in the evening and are especially designed to meet the needs of those who are employed during the day.

The first of the Lincoln Schools to be established was the Lincoln Preparatory School, known for many years as the Northeastern Preparatory School. This school had its real beginnings in 1897 in the single courses offered in History, Science, and other subjects of a cultural nature, and in certain trade courses intended to benefit men engaged in various occupations.

Gradually the trade courses were discontinued and the remaining subjects were welded into a regular high school program, upon the completion of which a standard high school diploma was awarded.

The primary purpose of the school has been effective preparation of students for college entrance. For this reason constant attention has been paid through the years to the maintenance and improvement of standards.

In 1925 women were admitted to classes on the same basis as men. Since 1924 the school has been accredited by the New England College Entrance Certificate Board, a marked distinction in the case of an evening school, and an expression of confidence that day school standards are maintained. The school today offers curricula in the general, scientific, and classical fields. The enrollment has increased from fewer than fifty students to almost five hundred of whom one-fifth are women. The faculty has been increased until it now numbers from twenty-five to thirty men of wide experience and training, drawn from the leading day preparatory and high schools of Metropolitan Boston.

Next in point of view of time was the Lincoln Technical Institute, which had its origin in the Northeastern Evening Polytechnic School. The latter received its title in 1901, when the work of various technical departments, such as the Department of Steam Engineering, the Department of Art, the Automotive School and the Department of Naval Architecture, were grouped together into curricula. By 1904 we find the school offering definite curricula, generally of three years' duration, in Architecture, Chemistry, Marine Engineering, Structural Engineering, Steam Engineering, along with courses in Art, Navigation, Surveying, Seamanship, and other related fields. In 1925 the title Lincoln Institute was given to the Northeastern Evening Polytechnic School. At this time the Lincoln Institute remodelled, lengthened, and consequently improved the former courses, offering four year curricula in Architecture, Chemistry, Civil Engineering, Electrical Engineering, Mechanical Engineering and Structural Engineering.

Since then, additional curricula have been added, namely, Aeronautical Engineering, Air Conditioning Engineering, and Diesel Engineering.

In addition, provision was made so that students need not pursue a complete curriculum but could elect individual courses related to their present occupations, the only prerequisite of entry being ability to pursue the course with profit to themselves. At the present time there are nearly five hundred students receiving instruction in the Lincoln Technical Institute in the various branches of engineering.

Since 1936 the curricular courses of the Institute have been credited by Northeastern University School of Business towards the Degree of Bachelor of Business Administration in Engineering and Business offered by that school.

The Officers of Administration are constantly alert to changing conditions and from time to time will modify existing courses to meet new needs and develop new courses so that real educational opportunities will be available to employed men and women at convenient evening hours. In particular they are sincerely interested in the problems of each student and are available for vocational and educational guidance. Through the Lincoln Schools many men and women have been able to solve their problems and to secure that education which has enabled them to succeed in the work for which they are adapted by ability and interest. Without the facilities of the Lincoln Schools many of these alumni would still be occupying minor positions with little opportunity for advancement on account of lack of training.

•

ENGINEERING TRAINING

Industry Demands Trained Men

THE remarkable engineering developments of recent years, while conferring many benefits on the human race, have created personal problems in industry that have demanded the attention of the best brains in the country. The decline of the apprenticeship system and the increased use of machines for processes formerly performed by hand have brought about a system so complicated that a young man entering industry cannot hope to achieve success without some form of specialized training. Even the man already employed in industry in an unskilled or semi-skilled capacity must seriously consider such training if he hopes for advancement.

Practically every young man today finds himself faced with four vital problems regarding his life work:

1. He must choose an occupation;
2. He must prepare for that occupation;
3. He must find a job;
4. He must feel he is making progress in that job.

To take these four steps in order has been very difficult during the past few years and perhaps is a problem that young men will always have to face. However, advancement is sure to be more rapid and secure when the problem is really understood and faced at any of the four stages than it would be were no thought given to it at all.

Preparing for a Job. This consists of an analysis of the various operations performed in the field in which a man wishes to become engaged. At each successive stage new abilities or greater skill or more learning are required. And a man's progress stops as soon as he ceases to be interested in the next step ahead. Many facilities for training are now available at all levels, from the semi-skilled to the professional, and an interview with any responsible educator will put a young man on the path to such training, much of it now available at convenient evening hours.

Finding a Job. This is frequently a difficult undertaking. Vocational Guidance departments, however, can give much help as to the steps that should be taken. One thing is certain: if a man has studied the field in which he wishes employment, and if he has prepared himself for work in certain branches of that field, he is more certain of employment than one who has given no thought to the matter. Furthermore, because of such training, he increases his chances of continued employment during industrial depressions.

Progressing in the Job. At first a man will probably occupy a minor position in industry. Here he will stop unless he prepares himself for more responsibility. He must consider what additional education he needs, what additional training he must undergo to be eligible for promotion. Then he must take definite steps to meet those needs so that his progress will be uniform, so that he increases his importance and responsibility, so that his occupational security becomes greater.

Value of Engineering Training

What results are to be expected from an engineering training such as that indicated above?

1. *Increased Earning Power.* This is borne out by the success of our own graduates who record salary increases not only following graduation but during the period of training, which is an indication that the training itself in many cases can be immediately capitalized to increase income.

In a study made by the Society for the Promotion of Engineering Education, 77% of graduates of Engineering Schools since 1922 expressed themselves as satisfied with their present jobs and 81% as satisfied with their prospects, but even more important, 95% expressed a definite liking for engineering work and more of them, 98%, felt that they made no mistake in taking an engineering course.

2. *Greater Occupational Security.* This results because a trained man is of greater value to his employer than the untrained man. He has undergone a training which makes him adaptable and in the event that his own particular field is unproductive, he can readily transfer his energies to some related field.
3. *Greater Guarantee of Progress and Promotion.* This is due to the fact that he has developed personal characteristics which enable him to meet men, to organize groups, to direct operations, and in addition, he is capable of precise, logical, and accurate thinking when it is required. Outside of his occupation, he has an increased personal satisfaction in living a richer life and in understanding more fully the society of which he is a part.

Opportunities for the Engineer in Metropolitan Boston

The following brief statements regarding Metropolitan Boston and its industries and activities show at a glance the opportunities available to the engineer, and demonstrate that with the continued growth of this area in population, importance, and activity, a large force of men, well trained in engineering experience, are needed for the maintenance and for the development of new and greater projects:

Boston is the business, industrial, and population center of New England; and New England is one of the richest industrial regions in the world.

It has an area of 457 square miles, and a population of 2,000,000, increasing at the rate of approximately 27,000 a year.

The steam and electrical mileage of Metropolitan Boston is greater than that of any similar area in the Western hemisphere.

Boston has over 52,000 manufacturing plants, with more than a billion dollars invested in these manufacturing establishments.

It has more than 25,000 well-ordered mercantile establishments.

It is the shoe and leather center of the world.

It is the center of the country's paper trade.

It is the greatest wool center in the world.

It is the most important cotton-manufacturing district in the Western hemisphere.

It is one of the three great rubber manufacturing centers of the United States.

High quality electrical apparatus is Boston's third greatest industrial output.

It is a great seaport, and has the most advantageously located airport in the United States.

It has a central planning agency, the division of Metropolitan planning, which deals with all highway, rail, and transportation problems for 43 cities and towns.

The Characteristics of a Good School

Before a prospective student makes a final decision regarding the evening school he wishes to enter he should make sure that it meets certain minimum requirements in order that he may receive the maximum benefit for his outlay of time and money. The characteristics of a good evening engineering school are:

1. It has a trained and experienced faculty; that is, the men who form its staff are themselves graduates of technical institutions, have had contact with industry or engineering, and also bring to bear on their work a knowledge of the best teaching methods and practices.

2. The curricula will be an effective combination of theory and practice. The student will be expected to co-ordinate by practical effort the theoretical work which is taught in the classroom. In the case of evening schools where work in the field is not practicable to the same degree or where it is totally impossible, this shortcoming will be made up by instructors who are in actual touch with the practical phases of the work they are teaching.

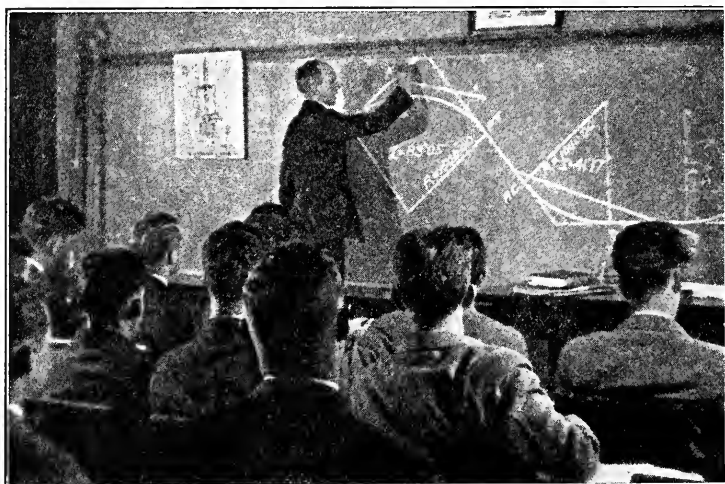
3. The student body is adequately prepared by preliminary study for the type of instruction which is to be imparted in the classroom. The level of achievement is not lowered by the admission of unfit students.

4. High quality of performance is maintained in the classroom, and students are expected to bring to bear on their studies an interest and enthusiasm which permit all work to be conducted on a high, qualitative plane.

5. The graduates have proved successful in the engineering field as a result of the training they have received.



CLASSROOM DEMONSTRATION OF TRANSIT



CLASSROOM INSTRUCTION IN CIVIL ENGINEERING

THE LINCOLN TECHNICAL INSTITUTE

Engineering Training in the Lincoln Technical Institute

THE LINCOLN TECHNICAL INSTITUTE is an evening engineering school in Boston, offering to the residents of Metropolitan Boston the opportunity for evening engineering studies and meeting the rigid requirements expected of a good school of engineering.

The Lincoln Technical Institute, while not claiming to offer a training equivalent to that offered by a day school of engineering or professing to turn out finished engineers, nevertheless offers an engineering training which is of marked value and which has the following outstanding features:

1. It aims to supply an increasing number of men who have been thoroughly trained in the fundamental theories of mathematics and the physical sciences, who can apply their knowledge to the independent solution of practical problems and to their everyday work, making intelligent use of their textbooks, manuals, and available literature.
2. The courses are conducted by experienced instructors, all of whom have had practical contact with the engineering profession.
3. Considerable stress is laid on the practical aspects of each course, and, where possible, practice is combined with theory. This procedure is simplified because of the practical training and experience of most of our faculty members.
4. All courses meet at convenient evening hours, usually three evenings a week for a full program, so that students may pursue this training without leaving their present occupations and yet have adequate time for outside study.
5. The fees charged are extremely moderate, and, being payable in installments, are within the reach of most ambitious men.
6. The student body is a well-prepared, experienced, and mature group of men of widely varying ages and occupations.
7. **Degree credit is given in the Northeastern University Evening School of Business for work completed in the Lincoln Technical Institute.**

The courses offered by the Lincoln Technical Institute are particularly valuable to men engaged in engineering and allied occupations, especially to those who lack the training and experience for advancement to positions of greater responsibility. The courses are also adapted to those who are not at present engaged in engineering but who desire to enter that field. In addition, those who wish a specialized training in a particular phase of engineering may pursue individual courses without registering for a complete curriculum. At the present time the following curricula are available: Chemistry; Air Conditioning, Aeronautical, Architectural, Civil, Diesel, Electrical, Mechanical, and Structural Engineering. Many individual courses are also available to those who do not wish a complete program, such as: Blue-Print Reading and Estimating, Airline Operations and Dispatching, and many other fields.

The recent depression has shown that the greatest single need that most of us have is security of employment. Without this security, satisfactory living is difficult, if not impossible. We have learned, furthermore, that this security may best be obtained by providing oneself with such adequate training that we not only continue to be of service to our employer but that if possible we continue to make ourselves of increasing value. It is to be further secured by qualifying for some other occupation than the one in which we are at present employed. Those who suffered most in the recent depression were those whose specialization was so narrow that they could not adapt themselves to other related phases of their occupation, or those whose education was so general that it lacked depth. A sound engineering course such as that offered by the Lincoln Technical Institute in the evening will furnish a man with an opportunity, not only to obtain the specialization he needs, but furnishes him with a general training in engineering so that in the event of loss of employment through some economic catastrophe he may make a vocational readjustment with a minimum of lost motion.

High Schools Represented

During the year 1937-38 the following high schools were represented in the student body:

Abington High School, Pa.	Dorchester High School
Arlington High School	East Boston High School
Arsenal Technical School, Ind.	East New York High School, N. Y.
Ashland High School	English High School
Barre High School	Everett High School
Belmont High School	Foxboro High School
Bennett High School, N. Y.	Framingham High School
Beverly High School	Franklin High School
Beverly Trade School	Gloucester High School
Boston College High School	Greenfield High School
Boston Public Latin School	Gresham High School, Ore.
Boston Trade School	Hartford High School, Vt.
Braintree High School	Holy Cross Catholic High School
Brewster Free Academy	Houlton High School, Me.
Bridgton High School	Howe High School
Brighton High School	Huntington School for Boys
Brockton High School	Hyde Park High School
Brooklin High School, Me.	Ithaca High School
Brookline High School	Jamaica Plain High School
Browne & Nichols School	Johnson High School
Cambridge High & Latin School	LaSalle Academy
Canton High School	Lawrence High School
Central Evening High School	Lee High School
Chelsea High School	Lexington High School
Clifton High School	Lincoln Preparatory School
Clinton High School	Loring Villa Academy
Commerce (High School of)	Lowell High School
Dedham High School	Lynn Classical High School
Deerfield Academy	Lynn English High School
Deering High School	Malden Catholic High School

Malden High School	Roxbury Evening High School
Mansfield High School	Roxbury Memorial High School
Marblehead High School	Salem High School
Marlboro High School	Saugus High School
Marshfield High School	Scituate High School
Mechanic Arts High School	Sharon High School
Medfield High School	Somerville High School
Medford High School	Southboro High School
Medford Vocational School	South Boston High School
Melrose High School	Stetson High School
Merrimac High School	St. John's High School
Methuen High School	St. Johnsbury Academy, Vt.
Millis High School	St. Joseph's High School
Milton High School	St. Mary's High School
Mission Church High School	Stoneham High School
Needham High School	Sudbury High School
New Hampton School for Boys, N. H.	Summer High School
Newton High School	Taunton High School
North Quincy High School	Tilton Technical High School, Ill.
Norwood High School	Wakefield High School
Ober-Realschule, Germany	Walpole High School
Parsonsfield Seminary, Me.	Waltham High School
Passaic High School, N. J.	Watertown High School
Peabody High School	Wellesley High School
Plymouth High School	West Kent High School
Portland High School	Weymouth High School
Provincetown High School	Weymouth Vocational School
Quincy High School	Winchester High School
Reading High School	Winthrop High School
Revere High School	Woburn High School
Rindge Technical School	Worcester Trade School
River's High School	

Geographical Distribution of Students

During the school year 1937-38 the following cities and towns were represented in the student body of the Lincoln Technical Institute:

Allston	Chelmsford	Lawrence
Arlington	Chelsea	Lexington
Ashland	Dedham	Lowell
Atlantic	Dorchester	Lynn
Auburndale	East Boston	Malden
Ayer	East Braintree	Mansfield
Belmont	East Milton	Marblehead
Beverly	East Walpole	Marlboro
Boston	Essex	Marshfield
Billerica	Everett	Mattapan
Brighton	Foxboro	Medfield
Brockton	Franklin	Medford
Brookline	Framingham	Melrose
Brookville	Gloucester	Methuen
Cambridge	Hudson	Millis
Canton	Hyde Park	Milton
Charlestown	Jamaica Plain	Needham

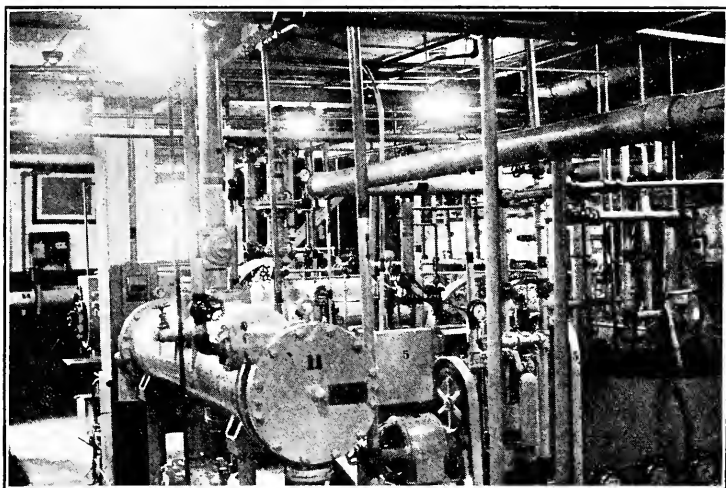
Neponset	Randolph	Taunton
Newburyport	Reading	Wakefield
Newton	Revere	Walpole
Newton Highlands	Roslindale	Waltham
Newtonville	Roxbury	Watertown
North Andover	Salem	Wellesley
North Quincy	Salem, N. H.	Wellesley Hills
North Weymouth	Saugus	West Newton
North Scituate	Somerville	West Roxbury
Norwood	South Boston	Weymouth
Peabody	South Weymouth	Winthrop
Plymouth	Stoneham	Woburn
Providence, R. I.	Stoughton	Wollaston
Quincy	Sudbury	

Faculty

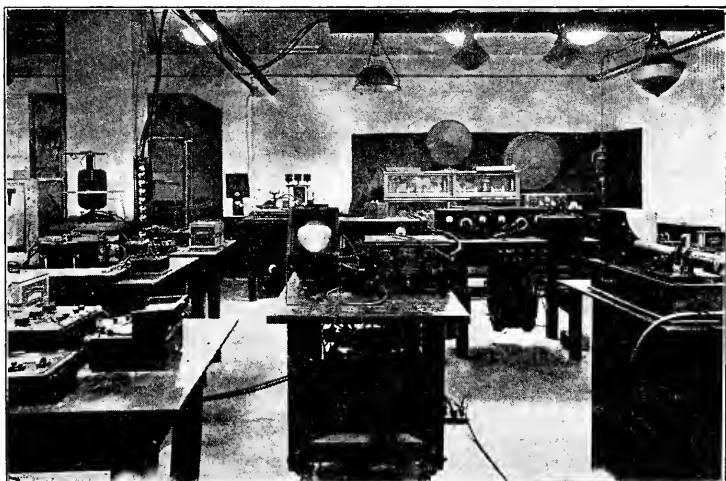
In an evening school it is particularly essential that none but men of wide experience and high ideals be appointed to the faculty. Accordingly, the faculty of the Lincoln Technical Institute has been very carefully chosen, all its members being graduates of the leading colleges and universities. They are men of culture and high ideals who are in sympathy with evening school students and understand their aims. They have had excellent training and wide experience in the subjects which they teach. Most of them have served with the institution for many years, and take a personal interest in its aims and its success. The average length of the service of faculty members is more than nine years. The average length of their teaching experience is fourteen years. All of them are at present employed as instructors in colleges and universities in the vicinity of Boston, or are men prominent in executive positions in the industrial and commercial world or in the professional practice of engineering.

Student Body

The students of the Lincoln Technical Institute are men of earnest purpose and firm endeavor who bring to bear on their work a thoroughness which augurs well for future success. Their ages last year ranged from 17 to 48, indicating that at almost all ages educational opportunities may be used for material advantage and to increase personal satisfaction in daily labor. Almost all the students are engaged in work during the day and many different occupations have their representatives in the student body, a fact which demonstrates that the school can be of service to men in many walks of life. A list of the various occupations of some of the students attending last year is given below and will prove interesting.



MECHANICAL ENGINEERING LABORATORY SCENE



SECTION OF THE ELECTRICAL MEASUREMENTS LABORATORY

Occupational Survey

The following are some of the occupations represented in the student body during the school year 1937-38:

Accountants	Janitors	Printers
Attendants	Laboratory Assistants	Railroad Workers
Barbers	Laborers	Rodmen
Battery Service Men	Landscape Gardeners	Salesmen
Blue Printers	Leather Workers	Shippers
Bookkeepers	Librarians	Shoe Workers
Bricklayers	Linesmen	Stenographers
Butchers	Machinists	Students
Carpenters	Mail Carriers	Superintendents
Chemists	Managers	Surveyors
Clerks	Masons	Tailors
Collectors	Mechanics	Technicians
Contractors	Messengers	Tellers
Cooks	Metal Workers	Tile-setters
Draftsmen	Meter Readers	Timekeepers
Electricians	Millhands	Tool Makers
Engineers	Newsdealers	Truckmen
Engineers' Assistants	Office Workers	Upholsterers
Experimenters	Painters	Watchmakers
Factory Workers	Pharmacists	Welders
Farmers	Photostators	
Foremen	Plumbers' Helpers	
Gas-Station Attendants	Porters	
Inspectors	Pressmen	

Location of School

The Lincoln Schools, including the Lincoln Technical Institute, are affiliated with Northeastern University and have the privilege of using the facilities of the University. The work is conducted in three buildings. The main building, known as the West Building, is in process of construction opposite the Boston Opera House and will be available for use after August 1, 1938, and will contain the headquarters of the school. This building has a hundred thousand square feet of space and is adequately equipped with classroom and laboratory facilities. Certain classes are held in the Y. M. C. A. Building on Huntington Avenue where, too, there are classrooms and chemical laboratories. The third building used by the school is the South Building of the Northeastern University group and is situated in rear of Y. M. C. A. Building and contains classrooms and electrical and biological laboratories.

The school is easily reached from the North and South Stations, from the various points of the Boston Elevated System, and by automobile. Ample parking facilities are available in the rear of the Y. M. C. A. Building.

REQUIREMENTS FOR ADMISSION

THE LINCOLN TECHNICAL INSTITUTE bases its admission requirements on the student's ability to pursue satisfactorily the courses applied for. Candidates for admission should have recently completed a course in Algebra to Quadratics and Plane Geometry, or otherwise have acquired a good working knowledge of these subjects. In cases where prospective students have not completed courses in Algebra and Geometry, a special course is available, particulars of which will be furnished on request. Students may enter upon these studies in September or January. Division A Students begin their studies on September 19 and continue until May 26. Division B students begin classes on January 10 and continue until the same date, but in addition must take a summer course (fifteen weeks, two evenings a week) if they wish to complete the work of the Freshman year by the following September.

Classification of Students

Regular Students. To be admitted as a regular student, that is, as a candidate for the diploma, an applicant must present evidence of graduation from a standard high school or fifteen units of secondary school work. Among the units presented for admission must be one unit in Algebra and one unit in Plane Geometry. Regular students are candidates for the diploma of the school.

Unclassified Students. Students who are not high school graduates but who have recently completed courses in Algebra or Geometry may be admitted as unclassified students. Permission for such students to continue in school will depend upon their knowledge of Algebra and Geometry as evidenced by transcripts of record, and, where desirable, tests in these subjects, and also upon their early performance, in the Freshman Mathematics class. Unclassified students may become regular students on the satisfactory completion of the work of the Freshman year.

Special Students. Students who are not candidates for the diploma but whose previous education and training fit them to pursue individual courses or a special program may be admitted as special students.

Entering Classes

Division A Students. Students who enter school at the beginning of the normal school year in September are termed Division A Students. Programs for these students can be arranged so that the work of the school year is completed by May or in early June by attendance three evenings a week. Summer courses are not necessary for Division A students.

Division B Students. Students entering school in January are termed Division B students. These students terminate the first part of their

studies by the end of May, attending three evenings a week. However, to complete the work of the Freshman year, it is necessary that they attend a Summer course which meets for two evenings a week. Students pursuing this program may continue with the Sophomore program in the September of the year in which they enter school.

Summer attendance is not compulsory, but in the event that a student does not pursue a summer course, attendance is necessary over a period of five school years to complete graduation requirements.

Late Registration

Students should avoid late registration. It is of fundamental importance that they be present at the first class sessions if they are to be successful in their studies for the year. Those who find it necessary to register late may be permitted to enter the school provided that they have not lost so much work as to render it unlikely that they will succeed in their courses.

TUITION AND OTHER CHARGES

Matriculation Fee. A Matriculation Fee of \$5.00 is payable by each student on his initial entrance to the school. This fee is not returnable, except where the student is refused admission to the school.

Tuition Fees for all Curricula Except Chemistry

Division A Students. The tuition charge for a student who is carrying a full program in one of the regular curricula is \$120.00 a year, along with the customary laboratory charges. Students who wish to pay this fee in full at registration will be given a discount of 10%, their charges thus being \$108.00.

Students who do not elect this method of payment may pay their fees on an installment basis in six payments of \$20.00 as follows:

1st payment	On registration
2nd payment	Week of October 17-22
3rd payment	Week of December 5-10
4th payment	Week of January 16-21
5th payment	Week of March 6-11
6th payment	Week of April 17-22

Division B Students. The tuition charge for a student carrying a full program is \$80.00. This fee may be paid in one payment at a discount of 10%, the charges thus being \$72.00. Students who do not elect this plan of payment may pay their fees in four installments of \$20.00 as follows:

1st payment	On registration
2nd payment	Week of February 13-18
3rd payment	Week of March 13-18
4th payment	Week of April 17-22

Tuition Fees for Chemistry Curriculum

Division A Students Only. The tuition fees for a student carrying a full program is \$100.00 a year along with the customary laboratory charges as listed on page 24. These fees are payable in one payment at a discount of 10%, charges thus being \$90.00 plus laboratory fees, or in five installments of \$20.00 plus laboratory fees as follows:

1st payment	On registration
2nd payment	Week of October 17-22
3rd payment	Week of December 5-10
4th payment	Week of January 16-21
5th payment	Week of March 6-11

In certain cases even the installment plan indicated above for Division A or Division B will not meet the needs of many deserving students. Such students are requested to confer with an officer of the school regarding a satisfactory plan for the payment of fees.

The Officers of Administration require that students abide by the terms of their agreement and that all students make payments on the dates specified.

Tuition Regulations

Charges for Partial Attendance. In cases where students are not carrying a full program the tuition fees are payable as follows:

- (a) If the total charges are \$80.00 or more, fees may be paid in six installments or in one payment at registration at a discount of 10%.
- (b) If the charges are more than \$40.00 and less than \$80.00; fees are paid in six equal installments.
- (c) If the charges are \$40.00 or less, fees are payable in two successive monthly installments.

No deduction from tuition fees is made because of late enrollment.

Bills. The school endeavors to mail bills to students ten days in advance of the payment date and also issues announcements in class to the effect that a payment date is falling due. In those cases where students have not received bills, they should intimate the fact to the school office. Students are reminded that the non-receipt of a bill does not exempt them from the responsibility of meeting their payments on the dates assigned and that failure to do so will cause the student's exclusion from class until he has conferred with an officer of the school.

In the event that absence from school is unavoidable at payment periods, students are advised to mail check or money order.

Students may obtain a statement of their accounts at any time.

Charges for Partial Attendance

In the event of a student's withdrawal from school, he is charged on a pro rata basis for the weeks he has attended. These charges are as follows:

- 34 week courses — 4% of the total charges for each week of attendance.
 20 week courses — 6% of the total charges for each week of attendance.
 16 week courses — 8% of the total charges for each week of attendance.

The same charges are applicable in the event that a student abandons a part of his program. In addition the full Laboratory Fee is charged in those cases where a student is pursuing a Science.

Laboratory Fees

All students taking courses which require laboratory work are charged laboratory fees in accordance with the following rates:

Aeronautical Laboratory	. . . . .	\$5.00
Alternating Currents Laboratory	. . . . .	5.00
Air-Conditioning Laboratory	. . . . .	5.00
Analytical Chemistry Laboratory	. . . . .	15.00
Diesel Engineering Laboratory	. . . . .	5.00
Electrical Laboratory	. . . . .	5.00
Electrical Laboratory, Advanced	. . . . .	5.00
Industrial Chemistry Laboratory	. . . . .	15.00
Inorganic Chemistry Laboratory	. . . . .	15.00
Mechanical Engineering Laboratory	. . . . .	5.00
Organic Chemistry Laboratory	. . . . .	15.00

Special Examination Fees. The fee for each special examination for advanced standing, for conditioned students, or for students who have for justifiable cause omitted to take the regularly scheduled examinations is \$3. In those cases where students have for justifiable cause omitted to take a mid-term or pre-announced quiz, an examination fee of \$1.50 will be charged for the make-up quiz. In each case the fee must be paid before the examination is taken.

Charges for Damages. Students who damage apparatus in the laboratories or who willfully destroy school property will be responsible for the replacement of such damaged articles or for the cost of replacement where this is undertaken by the school.

Cost of Drawing Materials. Students taking Freshman Drawing should be prepared to expend a sum of approximately \$5.00 for drawing supplies, *exclusive of cost of a satisfactory set of drawing instruments.*

Diploma Fee. On completing the curricular requirements for a diploma the student is expected to pay the diploma fee of \$10. This fee must be paid by May 15th in the year of the student's graduation.

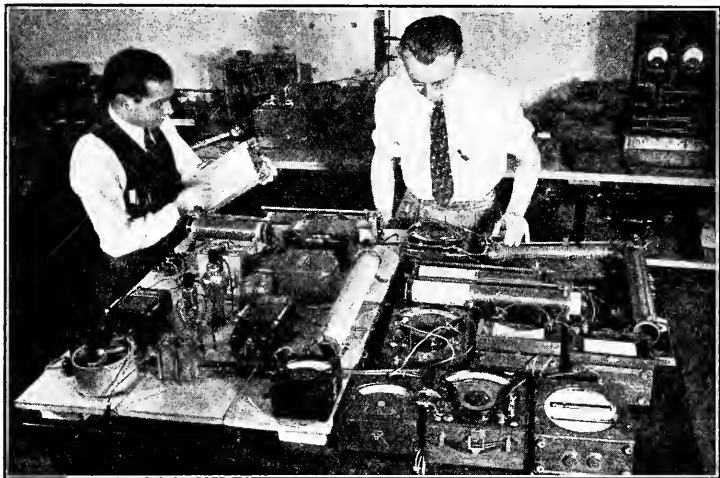
The tuition fees for individual and special courses will be found on page 61.

Refund Policy. Students who are forced to withdraw from a course or from the school are expected to notify the school office by completing the withdrawal blank which will be furnished.

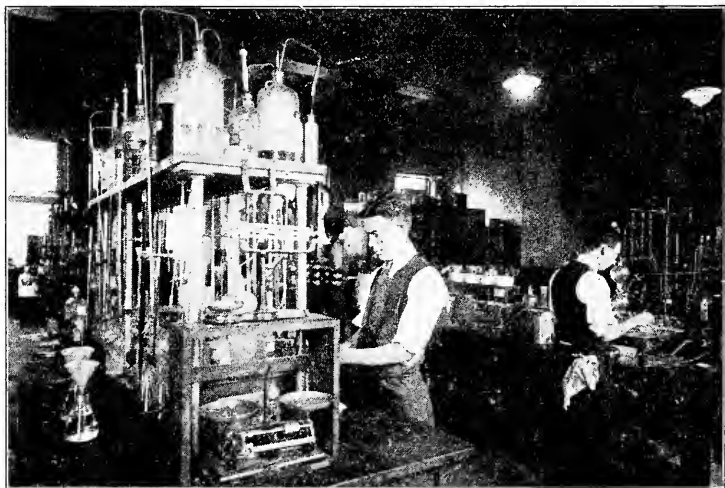
Since the school assumes the obligation of carrying the student throughout the year for which he registers, and since the instruction and accommodation are provided on a yearly basis, the Executive Council of the Lincoln Technical Institute has ruled as follows:

- A. Application for refunds must be presented within forty-five days after withdrawals from school.
- B. Refund in the case of complete withdrawal from school will be granted by the Committee on Withdrawals for reasons which they deem adequate. Among the reasons deemed adequate are the following:
 - (a) Personal illness.
 - (b) Change of employment by direction of employer whether in the schedule of time or in place of employment.
 - (c) The situation where the student becomes the sole or partial support of the family so as to make it impossible for him to continue his studies.
 - (d) Loss of position.
 - (e) Change of residence.
 - (f) A voluntary change of employment, the hours or the residence being such that he is unable to continue attendance.

In all the above cases it is expected that a medical certificate, letter from employer, or other appropriate substantiating documentary evidence will be produced by the student.



CHANGING D. C. TO A. C.



ANALYZING SOAP

ADMINISTRATIVE REGULATIONS

Applications for Admission

APPPLICATIONS for admission should be filed as early as possible in order that the necessary investigations may be made and the status of each student definitely determined before the opening day.

Registration

Each student is required to present himself at the School Office, and to have his course approved by the Dean to complete his registration. A student is expected to pay the first tuition installment and other fees required before beginning attendance.

Late registration will be permitted only at the discretion of the Dean.

The School Year

The school year is divided into two semesters of seventeen weeks each. The first semester extends from September 19 to January 27, and the second semester from January 30 to June 2. Attention is drawn to the fact that Division B students begin their studies on January 10 instead of at the beginning of the second semester.

Diploma Requirements

Students may register for single subjects or for complete courses, provided such registration meets with the approval of the Dean; but to receive the diploma of the Institute the student must fulfill the following conditions:

- a. Regardless of the advanced standing credit he receives, he must have been in attendance for at least a year preceding the date on which he expects to graduate; that is, he must complete at least one full year's work in the Lincoln Technical Institute.
- b. He must complete all the courses of his particular curriculum, either by attendance at this Institute, or by receiving advanced standing credit for those courses, or the equivalent of those courses as determined by the Dean.
- c. He must pass such final examinations as are required in the courses he has pursued. The various curricula have been arranged so that the courses can be completed in four years. However, an extension of time will be granted to those who wish to take longer to meet the requirements for graduation.

Sessions

Classes meet on week-day evenings. There are no classes on Saturdays. A full schedule will include three evenings a week. As a rule classes are scheduled from 7 p.m. till 9 p.m., although occasionally classes continue until 9.30 p.m. Laboratory periods in Chemistry are of four hours' duration.

Attendance Requirements

A careful record of attendance upon class exercises is kept for each student. Absence from regularly scheduled classes on any subject will seriously affect the standing of the student. It may cause the removal of certain subjects from his schedule and the listing of these as "conditioned subjects." However, if reasonable excuse for absence be presented, the student may be allowed to make up the time lost, and be given credit for the work; but he must complete the work at such time and in such manner as his instructor in the course shall designate.

A minimum attendance record of 70% must be maintained in all classes before a student will be admitted to examination.

Examinations and Quizzes

Examinations and quizzes are held throughout the term at the discretion of the instructors. Quizzes are to be made up at the discretion of the instructor. Final examinations are required upon the completion of all courses. The following system of grading is used:

A	—	90 to 100	—	Excellent
B	—	80 " 89	—	Good
C	—	70 " 79	—	Fair
F	—	50 " 69	—	Conditioned Failure
FF	—	Below 50	—	Complete Failure

A student marked "F" may receive one special examination. If he fails in that, he must repeat the course. A student marked "FF" must repeat the course. The fee for each special examination is \$3. Grades and reports are mailed to the students and will not be given out at the School Office. Under no circumstances will grades be given over the telephone.

Transfers

No students are permitted to change from one course to another without first consulting the Dean and receiving a Transfer Order signed by him.

Reports of Standing

An informal report of the student's standing is issued at the end of the first term; and the formal report, covering the year's record, is issued at the close of each year.

In the case of students who are under twenty-one years of age, reports may be sent to parents in the event of unsatisfactory work on the part of the student, non-compliance with administrative regulations, continued absence, and withdrawal. Parents of minors may obtain reports at any time on request.

Classification of Students

The ability of students to continue their courses is determined by means of class room work and examinations, but regularity of attendance and faithfulness to daily duties are considered equally essential.

When a student elects a curriculum, he is required to complete all courses included therein in order to graduate. If a student wishes to drop a course, or omit one and substitute another therefor, the consent of the Dean must first be obtained. Otherwise the student will be regarded as a special student.

A special student is permitted to attend the school, subject to the approval of the Dean, and to take such courses as the school offers. *Special students are not eligible for a diploma.*

Students Admitted with Advanced Standing

Students who, upon admission, were granted provisional advanced standing credit, but did not present evidence of their eligibility to such credit, shall not be granted the diploma of the school, unless the credentials are presented to the Dean before the close of the first year of attendance.

Methods of Instruction

Instruction is given by means of lectures, recitations, laboratory work, and practical work in the drawing rooms. Great value is set upon the educational effect of these exercises, which constitute the foundation of each of the courses. Oral and written examinations are held at the discretion of the instructors.

Subjects of Instruction

On pages 61 to 71 will be found a detailed statement of the scope of the subjects offered in the various courses. The subjects are numbered, for convenience of reference in consulting the various curriculum schedules.

Required courses, and those prerequisite thereto, must have been successfully pursued before any advanced course may be taken. The student must have become proficient in all the elementary subjects before undertaking advanced work, except that special students who by virtue of experience can profit by an advanced course may be admitted to such a course by the Dean.

By careful consideration of the curriculum schedules, in connection with the description of subjects, the applicant for a special course may select, for the earlier part of that course, such subjects as will enable him to pursue later those more advanced subjects which he may particularly desire.

Elective Subjects

Students electing any course not included in their curriculum will be required to take all examinations in that course, and to attain a passing grade in it before they will be eligible for a diploma.

Diplomas

Upon the satisfactory completion of any of the regular curricula, and the fulfillment of the conditions on pages 27 and 28 the student is entitled to receive a diploma. A graduation fee of ten dollars is required of all candidates for a diploma. This fee must be paid on or before May 15th in the year in which the student is to graduate.

The diploma with honor will be awarded to those students who have completed the curriculum for which they registered with an average of at least 85%.

Diplomas are awarded at the annual commencement exercises. These are held about the middle of June.

GENERAL INFORMATION

Opportunities for Recreation

MEN who are employed in offices or indoor occupations and who are pursuing a strenuous evening program of study should plan to take some systematic form of exercise in order that they may not impair their health and that they may do the most effective work.

The Lincoln Technical Institute is particularly fortunate in being able to place at the disposal of its students at moderate rates unexcelled recreational advantages, the Y. M. C. A. building having facilities in the nature of a gymnasium, swimming pool, bowling alleys, billiard room, game rooms and social rooms where students may obtain recreational privileges to their liking. Students may come from their work at the close of the day and enter a gymnasium class, take a swim, use the bowling alleys, or engage in other recreational pastimes before class time and thus renew their energy for the evening's work.

In addition, in the program of the Young Men's Christian Association will be found ample opportunities for religious, club, and other social activities.

Railroad Tickets

The railroad systems entering Boston issue students' tickets to students under twenty-one years of age. Applications for these may be obtained at a railroad office and presented at the school office for signature.

Library

A large and well-equipped library is available for the use of students. The reading rooms are open from 9 a.m. to 10.30 p.m. on week-days, and from 9 a.m. to 10 p.m. on Saturdays. Students have also the privilege of securing books from the Boston Public Library and its branches. To obtain this privilege application should be made to the Librarian, who will furnish the applicant with the necessary blanks.

Text Books and Supplies

The Lincoln Technical Institute enjoys the facilities of the Northeastern University Bookstore which is a department of the University and is operated for the convenience of the student body. All books and supplies which are required by the students for their work in the Institute may be purchased at the Bookstore. In addition, the Bookstore also carries a large number of general supplies. It should be pointed out that students attending Freshman Drawing should be prepared to expend a sum of approximately \$5.00 for drawing supplies, exclusive of the cost of a satisfactory set of drawing instruments.

Visitors

Visitors are always welcome at one class session in any department. Those who wish to visit any of the classes should call at the school office and obtain a visitor's card signed by the Dean.

Notify the Office Immediately

- (a) Of any change of address;
- (b) Of withdrawal from any course — otherwise the fee for that course will be charged;
- (c) Of withdrawal from the school — giving the date of the last lecture attended.

Interviews and Educational Guidance

Prospective students or those desiring advice or guidance with regard to any part of the school work or curricula, or who wish assistance in the solution of their educational problems, should note the fact that interviews are available without obligation, and that the officers of the school will do their utmost to see that a program is designed which is the most satisfactory for the individual student. In certain cases, other institutions may be recommended which suit the student's needs better. Furthermore it is important that those with educational problems to solve should realize the necessity for care in approaching educational work so that the program selected will be on the best educational basis.

Scholarships

The Executive Council has made available a few scholarships to assist needy students of good mental capacity who because of financial limitations might be deprived of educational opportunities. These scholarships when awarded usually meet one-half of a student's tuition charges for the year.

Awards for Scholastic Achievements

For the school year, 1938-1939, the Executive Council has offered the following scholarships:

Freshman Scholarship to the highest ranking freshman who returns for the Sophomore year, a scholarship of \$50. To the second highest ranking freshman who returns for the Sophomore year, a scholarship of \$25.

Sophomore Scholarship to the highest ranking sophomore who returns for the Junior year, a scholarship of \$50. To the second highest ranking sophomore who returns for the Junior year, a scholarship of \$25.

Junior Scholarship to the highest ranking junior who returns for the Senior year, a scholarship of \$50. To the second highest ranking Junior who returns for the Senior year a scholarship of \$25.

These scholarships will be awarded only to students pursuing a full program.

The winners of these scholarships for the past school year were:

<i>Freshmen</i>	John W. Hornsey	Frank J. Cunningham
<i>Sophomores</i>	John F. Leonard	Ellis Siegel
<i>Juniors</i>	Leslie N. Bishop	George A. Michael

The awards were made at the Annual Commencement exercises held in Bates Hall on June 16, 1937.

INFORMATION REGARDING COURSES

Curricular Programs Leading to a Diploma

THE LINCOLN TECHNICAL INSTITUTE offers four-year courses in the following fields:

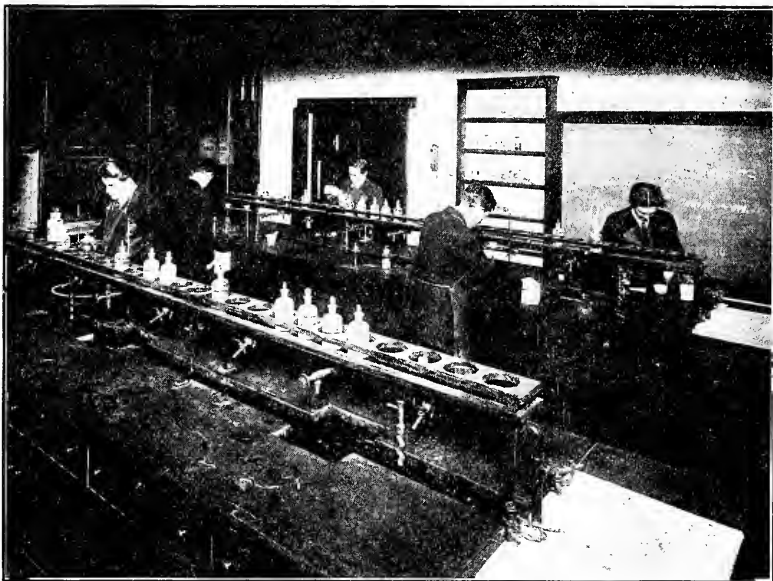
- Aeronautical Engineering
- Aeronautics
- Air Conditioning Engineering
- Architectural Engineering
- Chemistry
- Civil Engineering
- Diesel Engineering
- Electrical Engineering
- Mechanical Engineering
- Structural Engineering

On the satisfactory completion of a four-year course the appropriate diploma of the Institute is awarded. All these courses are of strictly college grade. In those cases where students are unable, because of circumstances, to carry all of the work prescribed in any year, an extension of time will be granted by the Dean, who will determine which subjects shall be excluded, and also the order in which the omitted subjects shall later be studied.

The work carried on in the regular curricula in Engineering assumes that the entering student has had previous training in Elementary Algebra to Quadratics and Geometry, and a good foundation in English.

Schedules of the various curricula are given on the following pages. The work of the first year is practically the same for all curricula.

When a student elects a curriculum he is expected to complete all the subjects in that curriculum in order to receive a diploma, unless he has the permission of the Dean to drop or omit certain subjects and substitute others for those omitted.



CLASS IN CHEMISTRY



MICROMOTION STUDY

AERONAUTICAL ENGINEERING

AERONAUTICAL ENGINEERING is a development of Mechanical Engineering. It is an attraction to those who are young and adventurous. The Aeronautical Engineer, however, is not of necessity a pilot. He is primarily the designer, the producer, the administrator.

The enormous increase in the manufacture of aircraft and the remarkable development of air service will furnish countless opportunities to those who are trained in aeronautical engineering.

The many phases of activity in this field will furnish opportunities in all branches of design of aircraft and of aircraft engines. Many positions of varying importance, including positions of high trust and responsibility, are available in the field of aircraft production and in the general administration of the aircraft industry. This will be increasingly the case if the Government continues to use private firms for the expansion of its air program.

The course offered by the Lincoln Technical Institute not only deals with the design of aircraft and aircraft engines, but embraces work related to airport and airline operations.

Courses of Instruction

First Year

Engineering Mathematics
Engineering Drawing
Physics

Second Year

Advanced Mathematics
The Airplane and Its Engine
Applied Mechanics

Third Year

Strength of Materials
Aircraft Engine Design
Airplane Design

Fourth Year

Advanced Airplane Engine Design
Aeronautical Laboratory
Airline Operations and Dispatching

These courses carry credit towards the Degree of B.B.A. in Engineering and Business offered by Northeastern University School of Business.

AERONAUTICS

THE continued development of Aeronautical Engineering and the secure establishment of air-travel, passenger, freight and mail, will provide many opportunities in the fields of airport construction and airport management. The work involves a wide range of duties including dispatching, operations, management, meteorology, and many others sufficiently diversified to gratify any ambition.

The course offered by the Lincoln Technical Institute gives first the fundamental training in Mathematics and Science for an understanding of aircraft and the principles of aircraft operation, and then proceeds to the various business, management, and operating phases of Aeronautics.

Courses of Instruction

First Year

Engineering Mathematics
Engineering Drawing
Physics

Second Year

Advanced Mathematics
The Airplane and Its Engine
Applied Mechanics

Third Year

Airline Operations and Dispatching
Economics
Accounting Aids to Management

Fourth Year

Management Problems and Policies
Air Transportation
Airline Management and Operations (1)
Meteorology (2)

(1) signifies First Semester Course

(2) signifies Second Semester Course

AIR CONDITIONING ENGINEERING

ENGINEERING problems incident to heating, ventilating, and refrigeration are encompassed in this program of instruction. It deals with the layout and calculations for air conditioning systems and refrigerating machinery.

Laboratory experimentation accompanies the theoretical courses and a series of visits to conveniently located plants in which air-conditioning systems are installed provides additional opportunity to obtain first-hand knowledge of operating problems.

Applications of air conditioning to railroads, theatres, industrial plants, office buildings, and homes are covered by this course. The development of portable air conditioning units is also taken up.

Opportunities in air conditioning engineering are found chiefly in the field of layout and design and in the field of installation. Many positions of a sales engineering type are also becoming available, since the marketing of air conditioning equipment requires a technical background as well as sales ability.

The training offered is sufficiently broad so that it will be useful in other basic engineering fields if occasion arises.

Courses of Instruction

First Year

Engineering Mathematics
Engineering Drawing
Physics

Second Year

Advanced Mathematics
Machine Drawing
Applied Mechanics

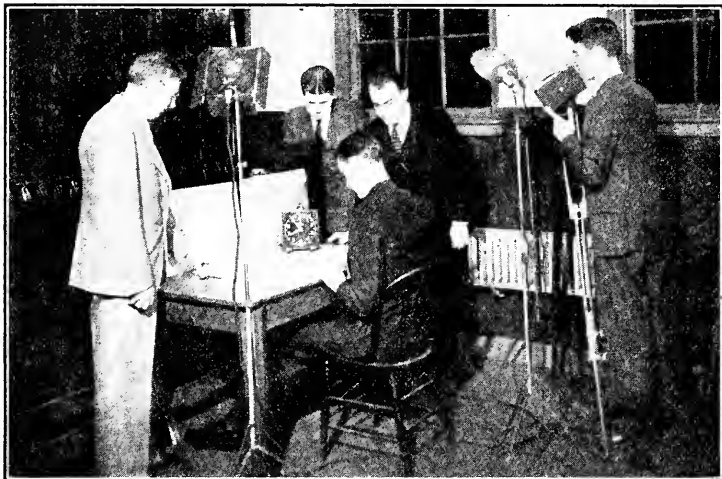
Third Year

Strength of Materials
Air Conditioning Design
Heating and Air Conditioning

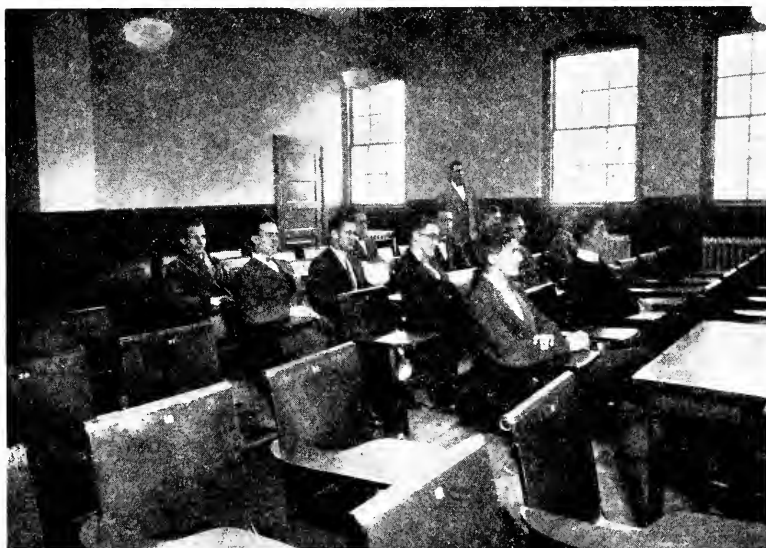
Fourth Year

Advanced Air Conditioning
Advanced Air Conditioning Design
Air Conditioning Laboratory

These courses carry credit towards the Degree of B.B.A. in Engineering and Business offered by Northeastern University School of Business.



INDUSTRIAL ENGINEERING LABORATORY



ONE OF THE CLASSROOMS

ARCHITECTURAL ENGINEERING

ARCHITECTURAL ENGINEERING is a profession which requires not only an intimate knowledge of the properties of steel, concrete, masonry, timber, and all of the other materials which enter into the structure of the building, but an acquaintance with the various styles of architecture as developed in previous civilizations, as well as the tendencies of modern practice, in order that these materials may be used and harmonize with the design of the building.

The course in Architectural Engineering undertakes to furnish the fundamental training necessary to start the student in his career. It prepares for the individual practice of Architecture, or for the supervision of construction. This curriculum will be of value to those who at present occupy minor positions in the architectural profession, and it is also possible for a student who plans to obtain employment in an architect's office to receive in his early training sufficient preparation for such work. He may then advance by combining theory with practice.

Courses of Instruction

First Year

Engineering Mathematics
Engineering Drawing
Physics

Second Year

Advanced Mathematics
Architectural Drawing
Applied Mechanics

Third Year

Strength of Materials
Architectural Design
Hydraulics (1)
Concrete (2)

Fourth Year

Engineering Structures
Advanced Architectural Design
Concrete Design (1)
Materials of Construction and Foundations (2)

(1) signifies First Semester Course

(2) signifies Second Semester Course

These courses carry credit towards the Degree of B.B.A. in Engineering and Business offered by Northeastern University School of Business.

CHEMISTRY

THE Science of Chemistry and Chemical Engineering have undergone a marked development during the past thirty years. One has only to pause for a moment and consider the tremendous changes that have taken place in our ordinary lives during that period to recognize not only the important part that has been played by the Chemist and the Engineer, but also to appreciate the important part that they are likely to play in the future.

The Chemist is in demand in every industry. His aid is sought in the operation of plants for the production of such products as gas, coke, oil, paint, fertilizers, drugs, etc. His help is requested in the development of more economical processes, in the potential use of by-products, and in the actual discovery of new products in private laboratories or in the research laboratories of industry.

As a result of the training offered by this curriculum a student has the opportunity of entering the field of Chemistry at a point appropriate to his period of study. The training is sufficiently general so that a variety of industries is open to him, yet deals quite specifically with particular industries in which a person may be definitely interested.

Courses of Instruction

First Year

Inorganic Chemistry Lectures
Inorganic Chemistry Laboratory

Second Year

Qualitative Analysis Lectures (1)
Qualitative Analysis Laboratory (1)
Quantitative Analysis Lectures (2)
Quantitative Analysis Laboratory (2)

Third Year

Organic Chemistry Lectures
Organic Chemistry Laboratory

Fourth Year

Industrial Chemistry Lectures
Industrial Chemistry Laboratory

- (1) signifies First Semester Course
(2) signifies Second Semester Course

For particulars regarding degree credit see special folder, available on request.

CIVIL ENGINEERING

THE purpose of this curriculum is to give the student an education in those subjects which form the basis of all branches of technical education, and a special training in those subjects comprised under the term "Civil Engineering." It is designed to give the student sound training, *both theoretical and practical*, in the sciences upon which professional practice is based.

Civil Engineering covers such a broad field that no one can become expert in its whole extent. It includes Topographical Engineering, Municipal Engineering, and Railroad Engineering. It covers land surveying, and construction of sewers, water works, roads and streets. All these branches of Engineering rest, however, upon a relatively compact body of principles. The students are trained in these principles by practice in the class-room and drawing-room, and, in addition are familiarized with the equipment used in Civil Engineering.

The curriculum is designed to prepare the student to take up the work of assisting in the location and construction of steam and electric railways, sewerage and water-supply systems.

Courses of Instruction

First Year

Engineering Mathematics
Engineering Drawing
Physics

Second Year

Advanced Mathematics
Surveying
Applied Mechanics

Third Year

Strength of Materials
Highway Engineering
Hydraulics (1)
Concrete (2)

Fourth Year

Engineering Structures
Concrete Design (1)
Materials of Construction and Foundations (2)
Structural Drawing

(1) signifies First Semester Course

(2) signifies Second Semester Course

These courses carry credit towards the Degree of B.B.A. in Engineering and Business offered by Northeastern University School of Business.

DIESEL ENGINEERING

NEW opportunities for the engineer can be seen in the tremendous growth of Diesel engine installation during the last five years.

In 1934 three-quarters of a million new Diesel horsepower was used in American industry, transportation, and agriculture. In 1935 and 1936 the installation figures were markedly over those of 1934. And yet the field for development of Diesel power in the United States is hardly scratched.

The high point in the expansion of the Diesel industry during 1935 was the increase in the buying of small engines — units ranging from five to seventy-five horsepower. These units were designed for small factories, lofts, machine shops, and garages, mills, small power houses, cotton gins, and irrigation projects. About 3,000 small Diesels were installed in 1935, indicating that plants ranging from 300 horsepower downward are offering a big field for stationary Diesels.

In connection with the increasing application of Diesel engineering to vessels, stationary power plants, automobiles, aircraft, locomotives, and so forth, there will obviously be needed large numbers of technicians, designers, research workers, plant managers, administrators, and executives. This curriculum is designed to provide training for men who wish to take advantage of opportunities in the field of Diesel Engineering.

Courses of Instruction

First Year

Engineering Mathematics
Engineering Drawing
Physics

Second Year

Advanced Mathematics
Machine Drawing
Applied Mechanics

Third Year

Strength of Materials
Diesel Engine Design
Heat Engineering

Fourth Year

Advanced Diesel Engine Design
Diesel Engine Laboratory
Diesel Engine Problems (1)
Diesel Installations (2)

(1) signifies First Semester Course

(2) signifies Second Semester Course

These courses carry credit towards the Degree of B.B.A. in Engineering and Business offered by Northeastern University School of Business.

ELECTRICAL ENGINEERING

THE applications of Electricity have developed rapidly in recent years and to attain proficiency in this field students must have a good working knowledge of Mathematics and Physics. It is essential that students planning to take this course should realize the fundamental necessity of obtaining a solid foundation in these subjects.

The instruction has been carefully balanced between recitations, lectures, home work, reports, and laboratory tests in order to develop in the student the power of perception, of rational thinking and of applying theoretical principles to practical problems.

It is not the purpose of the curriculum to attempt the impossible — to turn out fully trained engineers in any of the various branches of the science. It is designed to lay a thorough foundation for future progress along the lines of work which may particularly appeal to the individual, and give him an adequate working acquaintance with the essential principles which underlie each of the more specialized branches of professional activity. *Parallel with the theoretical work runs a carefully planned course of laboratory work which is intended to develop the student's powers of planning work for himself.*

Courses of Instruction

First Year

Engineering Mathematics
Engineering Drawing
Physics

Second Year

Advanced Mathematics
Electricity
Electrical Laboratory

Third Year

Alternating Currents Machines
Alternating Currents Laboratory
Applied Mechanics

Fourth Year

Elective Subject
Heat Engineering
Advanced Electric Laboratory

These courses carry credit towards the Degree of B.B.A. in Engineering and Business offered by Northeastern University School of Business.

MECHANICAL ENGINEERING

THIS curriculum is designed to give a foundation in those fundamental subjects which form the basis for all professional engineering practice, and especially to equip the engineer with a knowledge of the various phases of Mechanical Engineering. The course embraces instruction by textbook, lecture, drawing-room and laboratory.

All the mathematics required in the designing of machinery is given during the first two years so as to prepare for the designing and engineering courses given during the third and fourth years. The sequence of subjects from those of an elementary nature to Heat Engineering, Machine Design, etc., is arranged so that the student may have a complete understanding of the advanced courses.

The curriculum gives the student a good theoretical training and in addition devotes sufficient time to practical applications of theory so that he obtains a training which equips him for advancement in the field of Mechanical Engineering.

Courses of Instruction

First Year

Engineering Mathematics
Engineering Drawing
Physics

Second Year

Advanced Mathematics
Machine Drawing
Applied Mechanics

Third Year

Strength of Materials
Mechanism and Machine Design
Hydraulics (1)
Concrete (2)

Fourth Year

Heat Engineering
Machine Design
Engineering Laboratory

(1) signifies First Semester Course

(2) signifies Second Semester Course

These courses carry credit towards the Degree of B.B.A. in Engineering and Business offered by Northeastern University School of Business.

STRUCTURAL ENGINEERING

THE purpose of this curriculum is to give the student a special training in those subjects included in the term "Structural Engineering." It is designed to give the student sound and thorough training, both theoretical and practical, in the science on which professional practice is based.

Structural Engineering covers such a broad field that no one can become expert in its whole extent. It includes the design and construction of girders, columns, roofs, trusses, arches, bridges, buildings, walks, dams, foundations, and all fixed structures and movable bridges. It includes a knowledge of the relative merits of the design and construction of buildings, bridges and structures composed of different materials used by the engineer, such as concrete, reinforced concrete, timber, cast iron, and steel.

The curriculum is so arranged as to prepare the student to take up the work of assisting in the design and construction of structures; to undertake intelligently supervision of erection work in the field; and general contracting.

Courses of Instruction

First Year

Engineering Mathematics
Engineering Drawing
Physics

Second Year

Advanced Mathematics
Structural Drawing
Applied Mechanics

Third Year

Strength of Materials
Structural Design
Hydraulics (1)
Concrete (2)

Fourth Year

Engineering Structures
Advanced Structural Design
Concrete Design (1)
Materials of Construction and Foundations (2)

(1) signifies First Semester Course

(2) signifies Second Semester Course

These courses carry credit towards the Degree of B.B.A. in Engineering and Business offered by Northeastern University School of Business.

CURRICULAR PROGRAMS LEADING TO A DEGREE

THE Lincoln Technical Institute works in conjunction with the School of Business, Northeastern University, in offering a six-year program leading to a degree of Bachelor of Business Administration in Engineering and Business, offered by the School of Business. This degree is offered with the following majors: Aeronautical, Air Conditioning, Architectural, Civil, Diesel, Electrical, Mechanical, and Structural.

For Lincoln Technical Institute Students

Students of the Lincoln Technical Institute who desire to supplement their technical training with training in the field of business may qualify for the Bachelor of Business Administration degree in Engineering and Business awarded by Northeastern University School of Business by undertaking study in that School either following their Engineering studies or simultaneously with them.

A total of 100 semester hours are required for the B.B.A. degree, of which 72 hours are required to be completed in class room work, 4 hours for assigned business readings and 24 hours for business, technical, or professional experience.

Students who wish to obtain the degree of B.B.A. but who do not wish to graduate from the complete Lincoln Technical Institute program may arrange a special six-year course which would enable them to omit certain engineering subjects from their programs, replacing these by subjects of a business nature. Students who have this plan in mind should interview the Dean of the School by appointment.

For Lincoln Technical Institute Graduates

Graduates of the Lincoln Technical Institute are given 40 semester hours' credit for courses completed in the Institute. The remaining 32 semester hours of class work, plus the business readings and the credit for business, technical, or professional experience must be completed in the School of Business.

Graduates of the Lincoln Technical Institute who wish to seek admission to the School of Business with advanced standing credit for engineering courses must, of course, *meet the admission requirements of the School of Business*, and are subject to all regulations of the School. Those who are deficient in English will be required to complete, in addition to the above requirements, prescribed courses in English designed to correct the deficiency.

Following is the outline of courses for all candidates for the Degree of B.B.A. in Engineering and Business:

Required of All Students:

<i>Lincoln Technical Institute</i>	<i>Semester Hours</i>
Ten approved full courses in chosen engineering program or their equivalent	40

School of Business

Accounting Aids to Management	4	}	24
Business Economics	4		
Financial Organization	4		
Business English	4		
Management Problems and Policies	4		
Business Readings	4		

In Addition:

Students specializing in *Administration* or *Management* will complete the following:

Fundamentals of Business Management	4	}	8
Business Planning and Research	4		

Elect four semester hours:

Marketing	4	}	4
Business Statistics and Forecasting	4		
Public Speaking	4		
Business Reports and Conferences	2		
Legal Aspects of Business	4		
Business Psychology	2		
Government Controls in Business	4		
Business Administration Seminar	4		

12

Students specializing in *Distribution* or *Sales* will complete the following.

Marketing	4	}	8
Principles of Selling	2		
Sales Management	2		

Elect four semester hours:

Modern Advertising	2	}	4
Business Statistics and Forecasting	4		
Public Speaking	2		
Business Reports and Conferences	2		
Legal Aspects of Business	4		
Business Psychology	2		
Credits and Collections	4		
Government Controls in Business	4		
Business Planning and research	4		

12

Business, Technical or Professional Experience

24

100

SPECIAL COURSES

In addition to the regular curricula the Lincoln Technical Institute offers single unit courses of an intensive nature for the benefit of those who do not wish to pursue a complete curriculum but who wish rapid and immediate knowledge of certain fields, whether to supplement former training or to obtain preparation which will permit them to enter a new line of endeavor. At the present time the following courses are available:

- Air Conditioning
- Airline Operations and Dispatching
- Blue-Print Reading and Estimating
- General Aeronautics
- Methods Engineering (Time and Motion Study Methods)

On the successful completion of each of these courses, an appropriate certificate is awarded, which indicates that the work has been satisfactory.

Air Conditioning

This course has been designed to be intensely practical. It is intended for those who are employed in this field and who wish to extend their knowledge of it. It is also of value to those who wish to enter this field from the practical installation and service angle rather than from the point of view of designing air-conditioning equipment. Those engaged in or entering this field in the sales department will find the course extremely profitable. Appropriate demonstrations and laboratory work are included, and visits are made to conveniently situated plants for instruction purposes.

For those interested in Air Conditioning Engineering, a four-year curriculum is available, particulars of which may be found on page 37.

The Air Conditioning course deals with the following topics:

- Principles of Air Conditioning
- Properties of Air
- Psychometric Chart and Tables
- Comfort Zones in Air Conditioning
- Heat and Properties of Steam
- Temperature and Air Measurements
- Conductivity of Various Building Materials
- Properties of Insulation and Proper Usage
- Rules for Figuring Heat Losses
- Calculation of Heat Loss from Buildings and Proper Heat Transmission Coefficients to Use in Calculations
- Actual Layout and Design of an Air Conditioning System in a Residence
- Different Types of Furnaces and Boilers
- Different Types of Oil Burners
- Controls for all Types of Heating Systems
- Different Types of Fans

Study of Different Heating Systems and the Design of these Systems, including: Steam (pressure, vapor, and vacuum), Hot Water (gravity, pressure, forced circulation), and Fan with Steam or Hot Water (split system)

Types of Fuel

Ventilating Systems and State Requirements

Calculation of Heat Gains for Different Buildings for Use in Design of Cooling Systems

Fundamentals of Refrigeration

This course lasts for thirty-four weeks, one evening a week, classes meeting from 7 p.m. to 9 p.m.

Fees: Matriculation fee	\$5.00
Tuition fees (payable in monthly installments)	40.00

Airline Operations and Dispatching

The airlines of the United States as we now know them started operations during 1928. In that year approximately 50,000 passengers were carried with a daily mileage of 29,000 miles. During 1936 we find the passengers carried for one month more than twice the yearly total of 1928 (110,000 during July) and the daily average of miles flown mounting to over 200,000. Directly employed by the 22 airlines of the country are approximately 10,000 persons *of whom over 8,000 are ground personnel*. It is to fit young men for employment in this ground personnel that this course is designed.

The scope of this course is primarily practical with only sufficient technical subject matter included to give an intelligent grasp of the subjects necessary for airline operations. Radio operation and airline procedure will be stressed with emphasis placed upon obtaining a radio-telephone operator's license. Meteorology, both theoretical and practical, will be covered with emphasis upon airline practice and the obtaining of an airway observer's certificate. The duties of an office agent will be covered with training in the problems of interline reservations and ticketing. Office procedure and forms will be analyzed and the duties entailed in mail handling, etc. Actual dispatching methods and the handling of airplanes in the air by radio will be explained in theory and supplemented by observation at the airport.

Students completing this course will have undergone a training which would meet the basic requirements of most airlines and should find an opportunity to prove their worth in actual service.

The course lasts for thirty-four weeks, meeting on Mondays from 7 p.m. to 9 p.m., beginning September 19, 1938.

Fees: Matriculation fee	\$5.00
Tuition fee (payable in installments)	40.00

Blue Print Reading and Estimating

As the title indicates, this course is devoted to instruction and practice in reading the various types of plans used in construction work. The work covers the methods of representing materials and details of construction. Blue prints dealing with all phases of building construction are studied. At each stage the necessary processes of estimating are dealt with, including the essential practical mathematics. An outline of the various topics follows: drawing, the language of engineers; simple forms of projection; blue prints; what they are, how they are made, what they show; reading simple blue prints; calculations for excavations; continuation of reading plans; masonry and cement; blue prints of larger buildings and machine drawings; brick work; roofing and shingling; comparison of finished plans or larger buildings with plans from which estimates are made; exterior finish; lathing and plastering; detail plans; interior finish; stairs, windows, etc.; pipe plans; general plumbing and heating; electrical plans; wiring and lighting; piping plans; methods of estimating heating; elementary ventilation; lighting design; painting specifications; summation of material schedules; placing of orders for material.

This course meets on Thursdays, beginning September 22 for a period of fifteen weeks, the class period lasting from 7 p.m. to 9 p.m.

Fees: Matriculation fee	\$5.00
Tuition fee	10.00

General Aeronautics

The field of aviation offers many opportunities not only to the Mechanical Engineer but also to those who have a more general interest in this subject. Many opportunities are available in connection with the construction and management of airports and airways. The commercial side of aviation is already affording an opening to many ambitious men. Other phases of the work deal with navigation, radio, and meteorology.

The essential subjects for a general knowledge of this branch of industry have been developed into a valuable course, the successful completion of which should enable a student to be a desirable candidate for a satisfactory position in this field.

The course includes a treatment of the Airplane and its Engine, Airline Operations and Dispatching, Air Transportation, and Meteorology.

Particulars of the content of these courses may be found in the alphabetical listing of courses on page 61.

The course meets for three evenings a week during the school year of thirty-four weeks, classes meeting from 7 p.m. to 9 p.m.

Fees: Matriculation fee	\$5.00
Tuition fees (payable in six installments)	90.00

Methods Engineering

In its broadest aspects a course in Methods Engineering includes a complete description of the various techniques and procedures necessary to a program of motion economy.

Those who should benefit most from such a study are men who wish to become motion-time analysis specialists; men who are concerned with the operation and administration of factory and shop processes, employee training, material handling, and work simplification, as well as those engaged in doing cost accounting work.

Specifically, the course includes: the development of motion economy, the construction and use of process charts, materials handling, micromotion (motion picture) analysis work, employee training through motion economy, time study analysis, job rate setting, and cost accounting in relation to Methods Engineering.

One semester of 17 weeks. Course meets on Wednesdays, beginning September 21, the class periods lasting from 7 p.m. to 9 p.m. with occasional classes meeting from 7 p.m. to 10 p.m.

Fees: Matriculation fee	\$5.00
Tuition fee (payable in installments)	20.00

ENGINEERING EQUIPMENT

Field Instruments of Civil Engineering

FOR work in the field the Civil Engineering Department possesses various surveying instruments representing the principal makes and types in general use.

The equipment includes six surveyors' compasses, two Keuffel and Esser transits, five Buff and Buff transits, one Buff and Buff triangulation transit, three Berger transits, one Hutchinson transit, two Wissler transits, one Gurley transit, one Poole transit, three Berger levels, two Keuffel and Esser levels, two Buff and Buff levels, one Bausch and Lomb precise level, two Gurley plane tables, two Buff and Buff plane tables, two Keuffel and Esser plane tables, and one Berger plane table.

There are Locke hand levels, lining rods, leveling rods, stadia rods, tape rods, engineers' and surveyors' chains, steel and metallic tapes, one 100-foot Invar steel tape, and all the miscellaneous equipment necessary to outfit the parties that the instruments will accommodate. The extent of the equipment and scope of the field work itself are designed to train the student's judgment as to the relative merits of the various types of field instruments.

For instruction in advanced surveying the equipment consists of an Invar steel tape and base line tapes, with the necessary spring balances, thermometers, etc., for base line work. Equipment for converting some of the better transits into instruments capable of stellar and solar observations is available, together with a Berger solar transit. For triangulation a Berger 10 second repeating theodolite and a Buff and Buff 20 second repeating precise triangulation transit are used. A Buff and Buff Coast and Geodetic level and Coast and Geodetic level rod enables precise leveling. For barometric leveling there is an aneroid barometer, and for hydrographic surveying a sextant and a Gurley electric current meter.

Electrical Engineering Laboratories

A large area in the basement of the Laboratory Building is given over to electrical laboratories which are of three types: the dynamo laboratory, the measurements laboratory, and the high tension laboratory.

Dynamo Laboratory

This laboratory is equipped with sixty generators and motors of different types, the size and voltage ratings being selected to reduce as much as possible the risk from high voltage apparatus while making available to the student commercial apparatus such that the various quantities it is desired to measure will be of reasonable dimensions.

Machines from five to twenty-five kilowatt capacity are used principally for this reason, but also because the student in his engineering practice early comes in contact with large and varied machinery in power houses and electrical plants generally.

For D. C. working, among others there are two sets of specially matched direct current six-kilowatt, 125-volt compound generators, which will work as shunt machines. Both pairs are driven individually by 15 H.P., 230-volt motors and used principally for parallel operation and similar work. A large 230-volt, 12 H.P., 200 R.P.M. Sturtevant motor is used for retardation tests, and an assortment of series, shunt and compound motors each fitted with brake pulleys, are used for routine motor testing.

A. C. Machinery

For A. C. working there is a fifteen-kilowatt (unity p.f.) three-phase, 240-volt alternator driven at sixty cycles, and a 7.5 kilowatt G. E. machine with special armature taps so that it may be used as single-phase, two-phase, three-phase, or six-phase synchronous motor.

There are also two 12.5 kilowatt (eighty per cent, p.f.) G. E. machines having each armature coil tapped out separately and giving various phase arrangements; a five-kilowatt Holtzer Cabot machine with three rotors, making it available as either a squirrel cage, wound rotor, or synchronous machine; a G. E. single-phase clutch motor, a type R. I. induction motor, a Wagner single-phase motor; two Wagner motors arranged for concatenation control, one five-kilowatt Holtzer three-phase synchronous converter, a Westinghouse 7.5-kilowatt two-phase motor, a ten horsepower Fynn-Weichsel Unity power factor motor, and a Westinghouse Synchronous Converter (10 kilowatt, 240 D. C. volts; one, three, and six phase; sixty cycles).

Auxiliary Equipment

For transformers there are six single-phase G. E. type H units wound for 550 volts and 220-110 volts; a set of transformers with Scott connection taps, and a Type R. O. constant current transformer, primary winding for 220-190 volts and secondary for 6.6 amperes, 310 volts maximum fitted with a load of eighty candle power 6.6-amperes, sixty-watt nitrogen filled tungsten lamps, and a pair of 550-220 110 volts G. E. three-phase transformers of 5-kva capacity. There is also a full equipment of necessary control and regulating appliances and eleven movable test tables fitted with the necessary terminals, switches, circuit breakers, etc., for setting up the various combinations required from time to time. Each student when performing an experiment does the complete wiring, no apparatus in the laboratory being permanently wired up except as to its normal, self-contained circuits.

Power is supplied over a special set of feeders, from the Boston Edison system.

There are also speed governors and Tirrel regulators, both A. C. and D. C., capable of being used with any special machines found desirable at any particular time. An Edgerton Stroboscope has recently been added to the laboratory equipment.

High Tension Laboratory

For high tension work there have been installed a pair of General Electric transformers of 4 kva. capacity giving 50 kilo-volts. A special room in the laboratory has been equipped for cable and insulation testing. The auxiliary equipment includes the necessary sphere gaps, induction regulators, calibrated volt-meters, etc., the transformers being supplied from a special motor-driven generator. The set has been supplied with the necessary kenotron tubes and controls for the rectification of the high potential alternating current for direct current working.

A 4000 ampere, low voltage transformer with regulator for current control is available for the study of the effects of heavy currents in conductors, switches, and contacts.

Electrical Measurements Laboratory

This laboratory is equipped with apparatus of two distinct types: first, that planned fundamentally for teaching the principles of measurements and, second, that which is used in teaching advanced standardizing methods as well as for keeping the instruments in daily use in the other laboratories properly calibrated.

It is supplied with a set of small storage cells for calibration work and a set of twelve 500-ampere-hour cells for current work.

The apparatus utilized in the first type of work includes the customary devices used for resistance, potential, energy, and magnetic measurements such as slide wire and Wheatstone bridges, Poggendorf's E.M.F. comparison, D. C. watt hour meter calibrations, magnetic comparitor, etc.

The second type of work uses the following Leeds and Northrup equipment: Precision Kelvin Double, Carey Foster, and Wheatstone Bridges; two type K potentiometers with auxiliary apparatus of volt boxes, standard cells, standard shunts of 10 and 100 ampere capacity, a set of resistance standards of the N. B. S. type and another of the Riechsanstalt patterns; a complete set of Inductance and Capacity Standards. For secondary standards of voltage and current the laboratory is equipped with Weston Electrical Instrument Corporation instruments with the necessary transformers.

Other equipment includes a Westinghouse three element oscillograph with full equipment, including a variable 1000 ampere standard shunt, fast and slow film holders; a phase shifter, G. E. rotating standard, and numerous types of A. C. watt hour meters. In the field of electronics and communication the following General Radio equipment is used: audio frequency meter; precision wave meter; low frequency oscillator (25-70,000 cycles); intermediate frequency oscillator; capacity, inductance, universal, radio frequency, and vacuum tube bridges; two electron oscillographs with Bedell sweep circuits with special auxiliary equipment; Edgerton Stroboscope; and a variety of wave filters of the low, high, and band pass types. The laboratory is equipped with a Leeds and Northrup Vreeland oscillator; G. E. vacuum tube voltmeter; "Comet-Pro" superheterodyne receiver for radio frequency bridge balancing.

The following equipment has been constructed by the department: an attenuator; A. C. and D. C. artificial telephone line; beat frequency

oscillator; multi element electrically driven contactor for use with cathode ray oscillograph; magneto-striction and Quartz crystal oscillators; multi vibrator and numerous amplifiers, power packs, oscillators, vacuum tube voltmeters, etc.

Briefly, the laboratory is equipped for practically any work in electrical measurements outside of the absolute determinatons as carried on in national standardizing laboratories.

The Instrument Room is supplied with eighty-five high grade General Electric Company and Weston Electric Instrument Corporation alternating current voltmeters and ammeters, with a number of potential and current transformers, and with nine polyphase and sixteen single-phase indicating wattmeters, each of double current and double voltage ranges.

For direct current working there are seventy-five voltmeters (of triple range), ammeters and millivoltmeters of the above makes. There are twenty-five standard shunts of ranges from 10 to 100 amperes with uniform drops of fifty millivolts to go with the millivoltmeters.

There is also a large and varied assortment of auxiliary equipment such as sliding rheostats for circuit control, non-inductive loading resistance, air core loading reactances, frequency indicators, power factor indicators, etc.

Chemical Laboratory Equipment

For experiments and investigations in Chemistry there are available two laboratories with the following equipment:

Analytical Chemistry

The laboratory for analytical chemistry is fully equipped for giving instruction in the usual undergraduate courses. Each student is supplied with the necessary Pyrex and Kimble laboratory glassware, Sillimanite and Coors porcelain, and the standard pieces of hardware. Special equipment of all types including an ample supply of platinum ware is available at the stockroom.

The electrical equipment includes a Kimley electro-analysis machine for the determination of copper, lead, nickel, and zinc; two Leeds and Northrup potentiometers with accessories which can be adapted to pH. determinations, potentiometric titrations, and the investigation of conductivities of solutions; a Hevi-duty electric furnace for use in ignition and combustion work; a Hoskins electric combustion furnace suitable for use in steel analysis; a Freas drying oven capable of adjustment for various temperatures; and numerous electric hot plates and sand baths. For these power is available in 220, 110, 12, 6, and 2 volts D.C., and 110 volts A.C. There are also available the necessary ammeters, voltmeters, galvanometers, and pyrometers.

Organic Chemistry

Equipment is available for undergraduate courses in:

- (a) Preparation of organic compounds.
- (b) Qualitative analytical work.

The molecular weight determination apparatus consists of a Victor Meyer outfit and several Dumas flasks.

For electro-chemical work rheostats, voltmeters, ammeters, and a converter capable of delivering alternating current at 11 amperes are available.

Drying operations are carried out with the aid of a steam-heated drying chamber, and electrically heated drying oven, drying pistols, and vacuum desiccators.

Other equipment consists of several mechanical stirrers, mercury seals, hot water funnels, extraction outfits, and a combustion furnace.

Several vacuum pumps are available, including a Cenco-Pneumavac vacuum pump.

Steam lines on the benches supply the steam for steam distillations, eliminating the necessity of individual steam generators.

Industrial Chemistry

The laboratory is equipped with high pressure steam, compressed air, vacuum, high and low voltage lines, and other facilities usually found in a chemical laboratory. Pipe-fitting tools and shop facilities are available for the construction of special equipment as the demand arises. Some of the standard pieces of equipment are: Premier Colloid mill, Freas electric oven, high temperature gas furnace operated by a centrifugal blower, Vorce chlorine cell, Carver electrically heated hydraulic press, and a Holtzer-Cabot 10 volt, 200 ampere motor-generator unit for studying electrochemical processes, such as electrolysis, electroplating, and electroforming. Agitators, pyrometers, voltmeters, ammeters, rheostats, and other accessory equipment are available.

Mechanical Engineering Laboratories

The Mechanical Engineering Department has well-equipped laboratories, containing new and modern machines run by steam, gasoline, water, and electricity. A separate high-pressure steam line connected directly with the boilers in the University's main power plant enables the steam-driven apparatus to be run with steam under full boiler pressure.

Steam Apparatus

The steam apparatus includes the following equipment. A Uniflow steam engine of fifty horsepower capacity and of the latest design, so equipped that a complete engine test may be run on the machine. The auxiliary apparatus connected with the engine includes a prony brake for measuring the output of the machine while a surface condenser is tied in with the exhaust line in order to obtain the steam consumption.

A Chicago steam-driven air compressor is arranged to make complete tests on both the steam and air ends of the machine. This compressor is also connected to a surface condenser.

A Warren direct-acting steam pump is connected up to run a standard pump test, the steam end being tied in with a surface condenser

and the water end with a rectangular weir for measuring the quantity of water delivered by the pump.

A twelve horsepower Curtis steam turbine of the impulse single-stage type, to which is directly connected an absorption dynamometer or water brake, is available for testing. The steam end of this turbine is piped to a Worthington surface condenser and also to a Schutt-Kierling ejector condenser.

A small Sturtevant horizontal steam engine is equipped for a complete test with a prony brake for the measurement of power output.

Other steam-driven apparatus includes a steam pulsometer pump, a steam injector, two small vertical steam engines for valve setting experiments, a heat exchanger for determining heat transfer between steam and water and a Lee steam turbine of twelve horsepower rating driving a two-stage centrifugal pump.

Apparatus is also available for experiments on the flow of steam through an orifice and for the determination of moisture content in steam through the use of throttling and separating steam calorimeters.

Power Plant

The steam power plant is also used for testing purposes. The plant is equipped with the necessary tanks and scales for weighing the feed-water; steam pressure gages; scales for weighing coal and ashes; draft recorders; Orsat apparatus; CO₂ recorder; electrical meters; thermometers; steam engine indicators; and other equipment necessary for complete power plant tests. The plant consists of four horizontal return tubular boilers, each of 1711 square feet of heating surface. Three of these boilers are equipped for burning coal and one for burning fuel oil. There are the various auxiliary appliances, such as feed-water pumps, feed-water heater, fuel oil pumps and heaters, automatic damper regulator, and steam and oil separators. The steam line of the Mechanical Laboratory is connected to a General Electric recording steam flow meter, while in the boiler feed-water line is located a water meter of the Buffalo make.

In the Engine Room are located four three-wire direct current generators, three of which are driven by Ridgeway reciprocating steam engines while the fourth generator is direct-connected to a Westinghouse-Parsons steam turbine.

Hydraulic Equipment

The hydraulic equipment in the laboratory includes a two-stage centrifugal pump with a dual drive or separate drive as may be desired. The drive is either direct from a fifteen horsepower direct current motor or else direct from a Lee single-stage steam turbine.

A six-stage centrifugal pump direct-connected to a forty horsepower direct current motor has been installed for testing purposes. The motor, through a speed regulator, has a range in speed from 900 R.P.M. to 2200 R.P.M. The pump is rated at 180 G.P.M. against a head of 450 feet. The capacity of the pump is measured by a Venturi tube of the

latest design. There is also a rotary pump driven direct by an electric motor.

Other machines for hydraulic experiments are a triplex power pump, driven by a three horsepower electric motor, a hydraulic turbine of the Pelton Wheel type, a small single-stage centrifugal pump driven directly by a $\frac{3}{4}$ -horsepower gasoline engine, a triangular and a rectangular weir for measuring quantities of water discharged by the various pumps in the laboratory, besides the necessary tanks, platform scales, and hook gauges.

Internal Combustion Engines

Under the internal combustion laboratory equipment may be listed a Fairbanks-Morse ten horsepower gasoline and oil engine, so arranged that tests may be run with various kinds of fuels and complete test data obtained; a new Plymouth automobile engine arranged to run tests with different fuels and carburetors; and two gasoline airplane engines for demonstration purposes.

Several Diesel engines of various types have been installed, including a 30 H.P. high speed Fairbanks-Morse machine driving a 19 K.W. D.C. Generator, an auto truck Diesel, and two small engines for dismantling and demonstration purposes.

Refrigeration, Heating, and Air Conditioning

The refrigeration equipment includes a $\frac{3}{4}$ -ton Frick ammonia refrigerating machine equipped with a double pipe condenser, ammonia weighing tanks and a specially designed indicator, and a standard air-cooled Frigidaire sulphur dioxide machine. Both of these machines are arranged for testing purposes. A Triumph compressor is also available for demonstration work. Apparatus for the determination of heat transference through various substances is available.

A constant temperature room is equipped with apparatus for either heating or cooling. Additional equipment consists of a warm air pressure system with Timken oil burner equipment and complete automatic controls, a Fedders type unit heater, and oil burning equipment and controls for demonstration purposes.

For fan testing, a multi-blade blower of Sturtevant manufacture driven by an electric motor is set up for running different tests with varying capacity.

A Carrier air conditioner, motor driven, and equipped with automatic humidity control, is arranged for testing.

Testing Material and Heat Treatment Equipment

The testing materials equipment includes a 50,000 pound Olsen Universal Testing Machine equipped for tension, compression, transverse bending, and shearing tests; a 2,000 pound automatic shot cement tester equipped with transverse tools; a 10,000 inch pound Riehle torsional testing machine; a 220 foot pound Riehle impact tester for Charpy Izod or tension tests; a White-Souther motor driven fatigue tester holding two

specimens at one time; and a Ro-Tap sieve shaker with time switch and sieves for mechanical analysis of aggregate. Among the measuring instruments are Brinell and Olsen-Firth hardness testers; extensometers for tension, column, and beam tests, and a torsion meter.

For heat treatment, an electric furnace and a Stewart triple-purpose gas-fired furnace are available with pyrometers for temperature measurements.

For studying the effects of heat treatment, a large metallographic outfit of Bausch & Lomb make is used. This apparatus makes possible a magnification of from 125 to 2600 diameters for inspection and taking photographs of crystalline structures of metals. Equipment is available for polishing and etching specimens in preparation for examination of the crystalline structure of the metal being studied.

Polaroid equipment for photo-elastic stress analysis is also available.

Miscellaneous Equipment

In addition to the apparatus mentioned above, the oil testing equipment includes a Saybolt Universal viscosimeter for viscosity determination, a Cleveland open cup tester for determining the flash point and fire point of different grades of oil, a Conradson carbon residue apparatus, a steam emulsion apparatus, a water power centrifuge, a cloud and pour test apparatus, a Union oil colorimeter for color number determination, and a Thurston friction oil tester for determining the durability and lubricating prospects of oils.

An Emerson fuel calorimeter is used for finding the calorific content of solid and liquid fuels, and a Junkers gas calorimeter is available for determining the heat content of gaseous fuels. For calibrating gages, two dead weight gage testers of 200 pounds and 500 pounds capacity are used for pressure gages, while for vacuum gages a water aspirator and a motor driven vacuum pump are available.

For measuring the flow of water in pipe lines, a Pitot tube, orifice, Venturi meter, and water meter are located in a pipe line for testing.

Apparatus for measuring flow of air includes a Pitot tube, an orifice, and an anemometer, besides the necessary draft gages.

Apparatus for measuring flow of steam consists of a calibrated orifice and a steam flow meter. A recording steam pressure gage is also available.

An experiment on "Friction of Drives" includes apparatus consisting of three pulleys of different materials with three different kinds of belts, which make possible nine tests with various combinations.

A motor-driven vacuum pump with a rated capacity of six cubic feet of free air per minute under 29½ inches of mercury vacuum is available for tests.

Included among the measuring instruments are five steam engine indicators, two internal combustion engine indicators, four hand tachometers (centrifugal type) with three speed ranges from 0 to 4000 R.P.M., one tachograph, one tachoscope, one rotoSCOPE for speed and vibration determinations, one recording thermometer, planimeters, revolution counters, thermometers, pressure gages, and a portable stroboscopes.

A small machine shop is used for maintenance work of the laboratory

and for thesis work. The machines available are a sixteen-inch motor-driven South Bend engine lathe, two belt-driven engine lathes, a vertical drill press, a small vertical drill, a horizontal milling machine, a shaper, a power hack saw, a motor driven double emery wheel, an arbor press, two nine-inch South Bend Workshop lathes, and an Eisler spot welding machine. There are also an anvil and a small hand forge for forging purposes.

Design and Drafting Rooms

The School possesses large, light, and well-equipped drawing rooms for the carrying on of the designing and drafting which forms so important a part of engineering work. These rooms are supplied with lockers containing the drawing supplies, and files containing blue prints, and photographs of machines and structures that represent the best practice. Drafting room blackboards are equipped with traveling straightedge devices which facilitate speed and accuracy in blackboard demonstrations.

LIST OF INDIVIDUAL SUBJECTS IN ALL CURRICULA

<i>Subject</i>	<i>Fee</i>
1. Accounting Aids to Management	\$40.00
2. Advanced Mathematics	40.00
* 3. Aeronautical Laboratory	40.00†
* 4. Air Conditioning, Advanced	40.00
5. Air Conditioning Design	40.00
* 6. Air Conditioning Design, Advanced	40.00
* 7. Air Conditioning Laboratory	40.00†
8. Aircraft Engine Design	40.00
9. Airline Management and Operations	20.00
10. Airline Operations and Dispatching	40.00
11. Airplane and Its Engine, The	40.00
12. Airplane Design	40.00
*13. Airplane Engine Design, Advanced	40.00
14. Air Transportation	40.00
15. Alternating Currents Machines	40.00
16. Alternating Currents Laboratory	40.00†
17. Applied Mechanics	40.00
18. Architectural Design	40.00
19. Architectural Design, Advanced	40.00
20. Architectural Drawing	40.00
21. Chemistry, Analytical Lectures and Laboratory	100.00†
*22. Chemistry, Industrial Lectures and Laboratory	100.00†
23. Chemistry, Inorganic Lectures and Laboratory	100.00†
24. Chemistry, Organic Lectures and Laboratory	100.00†
25. Concrete	20.00
26. Concrete Design	20.00
27. Diesel Engine Design	40.00
*28. Diesel Engine Design, Advanced	40.00
*29. Diesel Installations	20.00
*30. Diesel Engine Laboratory	40.00†
*31. Diesel Engine Problems	20.00
32. Economics	40.00
33. Electricity	40.00
34. Electrical Laboratory	40.00†
35. Electrical Laboratory, Advanced	40.00†
36. Engineering Drawing	40.00
37. Engineering Laboratory	40.00†
38. Engineering Mathematics	40.00
39. Engineering Structures	40.00
40. Heat Engineering	40.00
41. Heating and Air Conditioning	40.00
42. Highway Engineering	40.00

43. Hydraulics	\$20.00
44. Machine Design	40.00
45. Machine Drawing	40.00
46. Management Problems and Policies	40.00
47. Materials of Construction and Foundations	20.00
48. Mechanism and Machine Design	40.00
49. Meteorology	20.00
50. Physics	40.00
51. Strength of Materials	40.00
52. Structural Design	40.00
53. Structural Design, Advanced	40.00
54. Structural Drawing	40.00
55. Surveying	40.00

* Not offered in 1938-39.

† Plus Laboratory Fee.

DESCRIPTION OF COURSES

THE LINCOLN TECHNICAL INSTITUTE reserves the right to advance requirements regarding admission, to change the content and the arrangement of courses, the requirements for graduation, tuition fees, and other regulations affecting the student body. Such regulations will affect old and new students.

1. Accounting Aids to Management. (*No previous knowledge of bookkeeping or accounting necessary*)

A study of the broad background of accounting and business transactions so as to enable the student to analyze and interpret intelligently financial statements and other accounting reports. The course demonstrates the use of accounting in management and financial control. Emphasis is placed on the development of accounting fundamentals, preparation of financial statements, corporation and manufacturing accounts, evaluation of balance sheet items, analysis and interpretation of financial statements and other trends, and the use of accounting as an aid to management.

2. Advanced Mathematics. (*Prerequisite, Engineering Mathematics*)

In the first part of this course instruction is given by lectures and recitations in the following subjects: plotting of functions, interpolation, the straight line, the conic sections, curves represented by various equations of common occurrence in engineering, graphic solution of equations, determination of laws from the data of experiments, simplification of formulas. The plotting and analysis of charts in order to determine empirical formulas is an important part of the course.

The latter part of this course is devoted to lectures and recitations in the following subjects: rate of change, differentiation, maximum and minimum, integration, definite integrals, with application to the determination of area, volume, center of gravity, and moment of inertia. Problems are assigned to illustrate the use of all formulas studied in class.

Text: Frye's Graphical Mathematics.

Passano's Calculus and Graphs.

3. Aeronautical Laboratory. The first part of the course consists of preliminary experiments on calibration of gages and laboratory exercises devoted to various aeronautical and meteorological instruments such as transients in mechanical systems, mechanical vibrations, magnetic compasses, gyroscopic instruments, barometric altimeters, rate of climb meters, recording thermometers, and humidity instruments. Airplane engines are taken apart and assembled in order to gain a knowledge of the construction and principles of mechanisms involved in their operation.

The second part of the course is devoted to work on such airplane engines as a Pratt and Whitney Wasp 450 H.P. engine consisting of nine radial cylinders, a Curtis airplane engine, and other types. Various kinds of magnetos, carburetors, tachometers, etc., are studied and discussed.

4. Air Conditioning, Advanced. This is a continuation of Course 41 and is devoted to advanced principles and problems.

5. Air Conditioning Design. A particular building will be taken as a class problem for heating and air conditioning. Various systems will be discussed with their application to the building in question. A layout of piping and duct system will be made together with complete calculations and estimation of cost. An investigation and study of existing plants around the city will be made with trips to these plants wherever possible in order to bring out the practical problems involved in the design.

Part of the work is devoted to the study of various phases of refrigeration in their specific application to air-conditioning systems.

6. Air Conditioning Design, Advanced. This is a continuation of Course 4 and comprises similar problems, but with different specifications.

7. Air Conditioning Laboratory. This course consists of a series of tests on various types of air conditioning and heating apparatus. Among the pieces of apparatus tested are the following: air blower; unit heater; carrier air conditioner, provided for humidification or dehumidification; hot air furnace equipped with oil burner, humidifier, blower, and air filters; and also automatic controls and a special insulated constant temperature room for the study of problems in heating and air conditioning.

Experiments are made on various types of refrigeration and cooling apparatus. The refrigeration equipment consists of compression and absorption types and includes small commercial and domestic units using such refrigerants as ammonia and sulphur dioxide. A constant temperature room is used in testing the units. Insulation tests are also included in this course.

8. Aircraft Engine Design. This course covers the design of airplane engines involving the thermodynamic principles as well as the stresses in the crankshaft, connecting rods, cylinders, springs, and other parts of the engine.

9. Airline Management and Operations. This course provides a detailed study of airline organization including: operation, personnel, administration, equipment, airport facilities, financial structures, public relations, government regulation and aides, airways, and traffic problems. Designed primarily as an advanced study of the airlines of the United States from the business point of view rather than the technical.

10. Airline Operations and Dispatching. Designed especially for the student desiring to fit himself for airline employment, this course is primarily practical in subject matter. Aeronautical radio and meteorology are covered with emphasis placed upon subject matter required for governmental examinations. The duties and methods of an aircraft dispatcher are stressed. Subject matter also includes airline traffic procedure, interline reservations, and ticketing. Necessarily of an intensive nature this course requires an elementary knowledge of electricity.

11. Airplane and Its Engine, The. This is a foundation course covering the technical aspects of the airplane, airplane engines, and aerial navigation. Subject matter includes theory of flight, airplane construction, performance, internal combustion engines, airplane engine construction and types, propellers, instruments, and airplane types. Also covered briefly are elementary meteorology and navigation. This course is designed not only as an introduction to aeronautics for the engineering student, but also to provide the student pilot an inclusive course in preparation for governmental examinations.

12. Airplane Design. An advanced course in aerodynamics as applied to airplane design. The student will begin with specifications for an airplane and plan a complete layout, including performance calculations and stress analysis. Applied Mechanics and General Aeronautics are prerequisite to this course.

13. Airplane Engine Design, Advanced. This is a continuation of Course 8 and comprises similar problems, but with different specifications.

14. Air Transportation. A non-technical analysis of aviation as an industry and its growing importance in world development. Subject matter is divided into the following topics: historical development of aviation, civil and military development since the World War, U. S. airline system, private flying, industrial uses, government regulation and supervision, aviation training, modern air power, and lighter-than-air developments. This course is designed to give both the technical and non-technical student the complete picture of aviation by means of historical review and an inclusive study of present-day conditions.

15. Alternating Current Machines. (Prerequisite, Electricity)

A course of lectures, recitations, and problems dealing with the construction, theory, operating characteristics, and testing of the various types of alternating current machinery. The subjects embraced by this course are transformers, generators, synchronous motors, parallel operation of alternators, synchronous converters, single-phase and polyphase induction motors, commutating alternating current motors, and transmission of power by alternating current.

Text: Dawes' Electrical Engineering, Vol. II.

16. Alternating Currents Laboratory. (*Prerequisite Electrical Laboratory*)

The course begins by a thorough study of the construction and operation of A. C. instruments with particular attention to the single phase wattmeter and the polyphase wattmeter.

The A.C. Circuits, both series and parallel, containing resistance, inductance, and capacity, are carefully studied and analyzed by vector and complex calculations; Transformer Efficiency and Regulation; Transformer Heat Run; Constant Current Transformers and Three-Phase Transformer connections. Parallel operation of single phase transformers; Polyphase transformers. Voltage regulation and efficiency of alternators; operation of alternators in parallel.

17. Applied Mechanics. (*Prerequisite, Physics*)

A course of lectures and recitations comprising a study of the general methods and application of statistics to structures in equilibrium, including collinear, concurrent, parallel, and nonconcurrent force systems in a plane and in space; centroids and moment of inertia. Considerable time is devoted to tension and compression in frames, the computations of the reactions, the method of joints, and the manner of distinguishing members containing bending stresses. Vector diagrams are drawn to show the principles of graphical methods. Problems are used and assigned continuously to illustrate the underlying facts of the subject.

Text: Brown's Applied Mechanics.

18. Architectural Design. (*Prerequisite, Architectural Drawing*)

Elementary course intending to familiarize the student with the Orders of Architecture, that he may learn to distinguish the best proportions of the various styles of design, and develop his taste for the best work. An analytique problem of a classic doorway is drawn and rendered, as well as original designs embracing various architectural problems, chosen to stimulate the student's knowledge and imagination in applying the fundamentals. In connection with this course the instructor will outline a course of reading in Architectural History supplemented with lectures on the subject.

Text: Turner's Fundamentals of Architectural Design.

Hamlin's History of Architecture.

19. Architectural Design, Advanced. (*Prerequisite, Architectural Design*)

The design of various architectural problems of a more elaborate and complicated nature than Architectural Design. Plans, elevations, and sections will be drawn and rendered in wash. A Gothic window is analyzed and drawn at large scale. The Architectural History readings are continued as in Architectural Design.

Text: Turner's Fundamentals of Architectural Design.

Hamlin's History of Architecture.

20. Architectural Drawing. (*Prerequisite, Engineering Drawing*)

This course deals with the fundamentals of masonry construction. Plans, elevations and sections of a small school building of second-class construction are drawn and traced, special emphasis being laid upon the technique of the work, in anticipation of the student obtaining a position in an Architect's office during the day. Proper sizes of doors and windows are studied, as well as the lay-out of stairs, the construction of cornices, etc., and electric and heating layouts.

21. Chemistry, Analytical. (*Prerequisite, Inorganic Chemistry*)

Qualitative Analysis — Lectures and Laboratory — First Semester.

Lectures and recitations are carefully co-ordinated with laboratory work. Not only is the detection of the common cations and anions considered but also the theoretical principles relating to hydrolysis, solubility product, ionic equilibrium, amphoteric substances, complex formations, oxidation and reduction, correct concentrations, etc. Sequentially related experiments which may be combined into a complete system of analysis are performed. From time to time unknown solutions and substances are given the student, the analysis of which emphasizes the very practical side of the work.

Quantitative Analysis — Lectures and Laboratory — Second Semester.

The major operations of quantitative analysis, such as weighing, measurements of volumes, titration, filtration, ignition, and combustion are considered both from the theoretical and the manipulative aspects.

Typical analyses and common technical methods are discussed critically, and unknown solutions and substances, the analysis of which involves volumetric analysis, including acidimetry and alkalimetry; oxidation and reduction; and precipitation methods; are performed.

Each analysis requires correct calculation as well as careful analytical procedure. For this reason quantitative calculations are studied through the medium of representative problems.

22. Chemistry, Industrial Lectures and Laboratory. (*Prerequisite, Inorganic Chemistry*)

Lectures.

The lecture work in this course is designed to acquaint the student with the technology of the chemical industries. The material is presented in the light of present-day understanding of unit operations and unit processes and thus gives the student an up-to-date survey of the field of the industrial chemist.

In addition to the study of the acid heavy and basic heavy chemicals such as salt, sulfuric acid, nitric acid, soda ash, caustic soda, and chlorine, the course also includes an introduction to the chemical technology of such industries as rubber, paper, dyes, explosives, solvents, petroleum, soap, etc. The course content can be adjusted to meet the needs of the students in the class.

Laboratory.

The laboratory work supplements the lectures and acquaints the student with the plant processes used in the chemical industries.

The experiments are first carried out in test tubes and then on a much larger scale. In carrying out these chemical processes in the laboratory, the student controls the operation through the analysis of the products formed and thus becomes acquainted with the technical methods of analysis used in control laboratories.

This method is extremely valuable to men who are contemplating a career in any of the chemical industries. This is true regardless of the nature of his work, whether it be laboratory, plant, office, or sales work.

23. Chemistry, Inorganic, Lectures and Laboratory. (*Prerequisite, Elementary Chemistry, Engineering Mathematics*) *It is also recommended that students have completed a course in high school Physics.*

This course builds on the foundation laid by the student in his previous study of Elementary Chemistry and allied subjects. It aims to develop in the student an understanding of numerous laws, principles, facts of Chemistry, and to provide him with the preparation necessary for successful pursuit of more specialized work to which he may be looking ahead. The course should prove of value to those at present engaged in the field of Chemistry and to those who plan to enter that field. The work of the course embraces general class sessions, or "lectures", and separate laboratory periods.

In the lectures, the instruction is accompanied by appropriate demonstration experiments; adequate time is devoted to the solution of numerical problems that illustrate chemical principles and their application; students' difficulties are discussed; quizzes and longer tests are held at the discretion of the instructor.

During laboratory periods, students work out under supervision a variety of experiments involving procedures both of a qualitative and of a quantitative nature which are planned to illustrate important principles or facts; desirable laboratory methods are emphasized; principles and results are discussed. The student is required to make approved records of experiments.

24. Chemistry, Organic, Lectures and Laboratory. (*Prerequisite, Inorganic Chemistry*)

Lectures.

In this course the student obtains a thorough foundation in the principles and theories of organic chemistry. These are presented in a manner that emphasizes the relationships existing among the various classes of organic compounds. The practical nature of the subject is stressed by familiarizing the student with the industrial applications of these theories and principles to such industries as: petroleum, rubber, dyes, explosives, drugs, etc.

Laboratory.

The carefully selected preparations serve to give the student concrete evidence of the validity of the theories and principles of organic chemistry. They also help in developing the laboratory technique necessary in such manipulations as fractional distillation, physical and chemical separations, extractions, crystallizations, steam distillations, etc.

The fundamental types of chemical changes considered here are esterification, saponification, sulfonation, nitration, reduction, diazotization, and condensation.

25. Concrete. (*Prerequisite, Applied Mechanics*)

A consideration of the theoretical and practical principles involved in the design of concrete and reinforced concrete structures. The following subjects are thoroughly discussed: the design and capacity of existing single reinforced rectangular beams, double reinforced rectangular beams, and "T" beams; the fundamental principles underlying diagonal tension and bond stress; column design and methods of determining stresses in existing columns; the origin of curves and tables and their uses. Problems involving the above types of sections, first by the transformed area method and later by curves and tables, are done by the students.

Text: Dean Peabody's Concrete.

26. Concrete Design. This course will consist of the design of a cantilever retaining wall retaining wall with counterfortes, a typical bay of a reinforced concrete building, footing design, and a reinforced concrete bridge. This course will also include a detail discussion of the Hardy Cross method of moment distribution, column analogy, and a comparative discussion of stress analysis in rigid frames.

27. Diesel Engine Design. This course consists of a layout problem in which an engine is designed to develop a definite horsepower and in which the stresses in the various parts of the engine are analyzed.

28. Diesel Engine Design, Advanced. This is a continuation of Course 27 and comprises similar problems but with different specifications.

29. Diesel Installations. The work of this course is devoted to a study of the problems involved in the selection of suitable units for each installation.

30. Diesel Engine Laboratory. This course includes a preliminary series of experiments on various apparatus used in modern power plants using Diesel power to illustrate under actual conditions the principles developed on thermodynamics. These tests are in preparation for more complete experiments to be conducted during the following semester. The students here apply in actual tests the knowledge they have acquired in the classroom, and make complete reports of these experiments, including methods of testing and calculations. The following are illustrative of the type of work performed: calibration of gages, indicator practice, valve setting, flow of fluids through orifices, and weir calibrations.

31. Diesel Engine Problems. Analysis of the internal engine cycles based on the air cycle as well as the analysis with variable specific heats. The different types of Diesel engines are discussed and the methods of fuel injection are studied for each type.

32. Economics. The characteristics of modern business and industry are studied in terms of their operations and relationship to the modern economic system. Economics laws and principles are considered in terms of business conditions peculiar to our own time and country and how these laws govern prices, wages of labor, profits, credit, competition, work and working conditions, and rewards for business enterprise.

33. Electricity. (*Prerequisite, Physics*)

This course of lectures, recitations and problems is designed to give the student the necessary concepts and understanding of the elements of electricity so that he may study understandingly direct and alternating current machinery and circuits. The course includes: electromagnetism; electrostatics; batteries; calculation of the resistance of feeders and resistance combinations; Ohm's Law; Kirchoff's Laws; and electrical instruments such as galvanometers, ammeters and voltmeters.

The second part of this course includes: the study of direct-current generators and motors with their characteristics, losses, efficiencies and operation; the transmission and distribution of power; and the study of the alternating current circuit.

34. Electrical Laboratory. (*Prerequisite, Physics*)

During the first semester this course covers thoroughly by experiment the fundamental principles and practical applications of Ohm's Law as it applies to series, parallel and series parallel circuits; Kirchhoff's Law applied to networks, Direct Current Voltmeter, ammeter, millivoltmeter and shunts, and watt-hour meter.

During the second semester the student is given experimental work in Magnetic Circuits as found in everyday use such as circuit breakers overload and low voltage relays and coils. Brake magnets and ignition coils. Motor and generator field circuits.

Electrostatic Capacity as applied to Direct Current work only.

Construction and operation of D.C. Motors and Generators beginning with armature and field resistance measurement, and finishing with experimental proof of the fundamental laws of motor and generator operation.

Parallel operation of shunt and compound generators. Shunt, series and compound motor characteristics; Heat Run on D.C. Generator; Efficiency by stray power method, electrical supply of losses, separation of losses by the Retardation Method. Characteristics of Vacuum Tubes.

35. Electrical Laboratory, Advanced. (*Prerequisite, Electrical Laboratory*)

Experiments of the general type of those listed below will be performed and suitable reports written to give a thorough study of the results obtained in the laboratory.

V-curves and efficiency of synchronous motor; load test on a six-phase synchronous converter; load tests on polyphase and single phase of induction motors; load tests on a Fynn Weichsel motor; speed control of induction motors; demonstration of high voltage testing, Mercury Arc Rectifier Characteristics.

The last few weeks of the course are devoted to original research in the field in which each student is interested.

36. Engineering Drawing. This course is planned to meet the requirements of a class composed of students who have had no previous instruction in drafting, and also for those who may have had one or two years' work in preparatory schools.

Instruction is given in the testing, use and care of the instruments and drawing supplies, and about thirty drawing plates are made. The topics studied in these plates include: technique practice, lettering, geometric construction, orthographic projections, auxiliary views, revolution of objects, isometric, cavalier, cabinet and perspective projection, intersections, sections, helix and application, screw threads, dimensioning and inking. A number of practical problems, pertaining to the professional courses to be taken, in which drawing is the application, are also given.

These give the student a thorough training in the fundamental principles of mechanical drawing, so that he may easily do the drafting required in his professional course. A short lecture will be given at the opening of each class based on the work at hand, and individual instruction is given during the remainder of the class period.

For those who have had some experience in Mechanical Drawing, a special course is devised which will take care of individual needs and offer students more advanced work.

37. Engineering Laboratory. This course includes a series of experiments upon various kinds of equipment used in modern power plants to demonstrate under actual conditions the principles developed in the Heat Engineering course. The students apply in the laboratory the knowledge they have acquired in the classroom to actual tests on different apparatus. A complete report of the experiment is made for each test performed.

The following list is illustrative of the type of equipment tested during the course: Gage calibration, slide valve setting, steam calorimeter tests, steam engine test, gasoline engine test, air compressor, triplex power pump, steam injector, Warren steam pump, two-stage centrifugal pump, Pelton water wheel, Diesel engine, Curtis steam turbine.

38. Engineering Mathematics. (*Prerequisite. First courses in Algebra and Plane Geometry*)

Although the primary purpose of this course is to lay a thorough ground work for Analytical Geometry, Calculus, and Applied Mechanics, it should be understood that the course

is a complete unit in itself, enabling the student to handle a considerable proportion of the practical problems arising in engineering practice.

For the sake of a common ground work, a rapid review of the fundamental concepts, processes, theorems, and axioms, is given followed by factoring to quadratics, rectangular coordinates and graphs, radical equations, theory of equations, the binomial theorem and logarithms.

Approximately one-third of the course is devoted to the study of Plane Trigonometry and some of its practical applications. This part includes the solution of right triangles; solution of oblique triangles by the law of sines, cosines, tangents and half angle formulas, radians, trigonometric ratios, identities, and equations.

Instruction, including problems and exercises, is also given in the theory and use of the slide rule.

39. Engineering Structures. (*Prerequisite, Strength of Materials*)

First term is an introductory course covering outer forces, reactions, moments and shears for fixed and moving loads. The use of influence lines, the stress analysis of composite beams, torsion in rivets, three-moment equations, design of a deck plate girder bridge, and through plate girder bridge. Each student must design a deck plate girder bridge.

Second term deals with the computation of stresses of various trusses by the moving up load method and equivalent uniform live load method. Stresses in portals; slope deflection method and Hardy Cross method stress distribution in rigid frames.

Text: Sutherland and Bowman, "Structural Theory."

40. Heat Engineering. (*Prerequisite, Physics*)

In order to understand clearly the operation of the modern power plant, the theoretical principles involved must first be studied. This course, therefore, includes both the theoretical and the practical applications of the theory of heat. In the first semester the laws of the perfect gases and of the vapors, properties of steam, the use of the steam tables and the Mollier diagram are carefully discussed. A description is given of the many different kinds of apparatus used in the power plant such as steam boilers, engines, turbines, and auxiliary equipment including pumps, condensers, heaters, fans, etc., which are used in connection with the operation of a power plant. A large number of problems are solved during the course.

The aim of the course is to familiarize the student with the theory and application of prime movers that have fuel as a basis for the generation of power.

41. Heating and Air-Conditioning. The work of this course is carried along in the classroom through lectures and the application of the principles discussed is taken up by demonstrations in the laboratory and by visits to conveniently situated plants. Applications of air conditioning to industrial plants, theatres, railroads, office buildings and homes are discussed in the classroom.

The more important methods of heating and ventilating various types of buildings are studied. The principles of heat transfer and flow of air are taken up and the application of them in the different systems is brought out through lectures, problems, and demonstrations in the laboratory.

42. Highway Engineering. An outline of the principles governing the finance of highway project and assessments of street construction. Thorough discussion of the survey for a highway project. Lectures on the fundamental principles of highway design; namely, roadway, alignment, safety devices and accessories. Various present-day road surfaces are discussed. A study of the fundamental principles of soil mechanics as it relates to Highway design.

43. Hydraulics. (*Prerequisite, Applied Mechanics*)

This course is a study of the principles of both hydrostatics and hydro-dynamics. The subjects considered are: the pressure on submerged areas together with their points of application; the laws governing the flow of fluids through orifices, short tubes, nozzles, weirs, pipe lines, and open channels.

Text: Russell's Textbook on Hydraulics.

44. Machine Design. (*Prerequisite, Mechanism and Machine Design*)

This course applies, to more complicated machines, the principles presented in Course 48. Typical problems presented for design are the horizontal return tubular boiler, triplex power pump, and power shearing machine for steel bars.

Minimum sizes of the various parts are calculated and an assembly of the complete machine is drawn and traced. All calculations are carefully presented in notebook form.

Text: Haven & Swett — Design of Steam Boilers and Pressure Vessels.

Reference: Mark's — Mechanical Engineer's Handbook.

45. Machine Drawing. (*Prerequisite, Engineering Drawing*)

This course is taught on a problem basis with the student working out problems under the supervision of the instructor. The lectures and reading assignments correlate with the class problems. Short quizzes are given to cover the reading assignments. The principles covered include preliminary machine sketches, detailing from machines and from assembly drawings, dimensioning with reference to basic size system, sectioning and the making of assembly drawings from details, and also problems in cam construction.

The lectures and assigned readings take up such topics as fastenings, machine elements, methods of manufacture, jigs and fixtures, methods of reproducing drawings and those drawing techniques that are to be applied to the particular problem being done.

Text: Tozer & Rising — Machine Drawing.

46. Management Problems and Policies. Co-ordination of the functional relationships which exist between the different departments of business with the problems affecting the determination of administrative and managerial policies is the purpose of this study. Special attention is given to scientific management of industry and business and to the co-ordination of production with purchasing, sales, finance, and transportation. Cases and problems dealing with organization and expansion, consolidation and combinations; reorganizations, internal administration, industrial and human relations, and governmental control form the basis of discussion and study.

47. Materials of Construction and Foundations.

(a) Materials of Construction. A detailed study is made of the methods of manufacturing, properties, and uses of materials used in engineering work, such as iron, steel, lime, cement, concrete, brick, wood, and stone.

A study is also made of the methods of testing and the strength of various materials used by the engineer.

Text: Pulver's Materials of Construction.

(b) Foundations. This course is designed to give the student a clear, concise survey of the properties and characteristics of the common types of foundation structures in use. The subjects treated are timber and concrete piles; sheet piles of wood, steel, and concrete; cofferdams; caissons of the pneumatic box and open types; open wells; bridge piers and abutments.

Each student must write a report on simple cements, complex cements, concrete, steel, timber, piles, cofferdams, and caissons.

48. Mechanism and Machine Design. (*Prerequisite, Machine Drawing*)

The object of the first part of this course is to acquaint the student with the principles of mechanism which are met in practice and in machine design. The topics considered are belting, pulley, and gear train calculations, both simple and epicyclic, cam design and theoretical design of gear-tooth shapes. The instant center calculations and velocity diagram plots or common linkages are studied.

In the second part of the course the principles of mechanics and strength of materials, learned in earlier courses, are applied in the design of simple machines. Typical machines designed are the lathe arbor press and hydraulic flanging press. The problems are approached on a practical basis and good designing practice is followed as far as possible. Calculations of sizes of various parts are made and submitted, together with an assembly drawing of the machine studied.

Text: Elements of Mechanism — Schwamb, Merrill & James.

Reference: Mark's Mechanical Engineer's Handbook.

49. Meteorology. One semester course in synoptic meteorology. Course content is divided equally between theory and practical application. Topics included are: general

physics of the atmosphere, air mass theory, map interpretation, instruments and observation methods, United States Weather Bureau organization, airline practice, interpretation of Department of Commerce teletype designates.

50. Physics. A course covering the fundamental principles of mechanics, heat, light, sound and electricity. Each lecture period is supplemented with a problem period in which the student learns the practical application of the laws of physics. Some of the topics taken up in mechanics are equilibrium, center of gravity, accelerated motion, work, energy, machines, and fluid pressure. The part of the course on heat includes: expansion of solids, liquids, and gases, calorimetry and mechanical equivalent of heat. The course also covers the fundamental properties of light and sound, and the elements of electricity. Practical problems covering each phase of the work are assigned to fix in the mind of the student the principles taken up in the lecture period.

Text: Frye and Hodgdon's Practical Physics.

51. Strength of Materials. (*Prerequisite, Applied Mechanics*)

Strength I.

This course comprises the study of the strength of structural shapes in tension, compression, and bending. The subjects covered are the stresses and strains in bodies subjected to tension, compression, and shearing; common theory of beams with thorough description of the distribution of stresses, shearing forces, and bending moments; and deflection of beams.

Strength II.

This is a continuation of Strength of Materials I in which a study is made of the strength of shafting and springs; combined stresses in beams subjected to tension, compression, and bending; also strength of riveted joints, columns, and thin hollow cylinders, and brief consideration of strains and the relation of the stresses on different planes in a body.

52. Structural Design. (*Prerequisite, Structural Drawing*)

This course consists of a study of the design of such structural units as steel beams, girders, columns, trusses, riveted connections and steel frames as a whole. Particular attention is given to the practical phases of construction and their relation to design. The design of structural timber is also studied. In the first half of the year the student is given many problems which he works out at home and in class and the last half of the year is usually devoted to the design and detailing of some larger, more complicated structures or portions of structures.

53. Structural Design, Advanced. This is a continuation of Course 52 in Structural Design and consists largely of class problems of a more complicated nature. In recent years such structures as elevated water tanks, mill building frames, and portions of an office building frame have been designed in class. Considerable stress is laid on the practical phases of construction as well as design requirements.

54. Structural Drawing. (*Prerequisite, Engineering Drawing*)

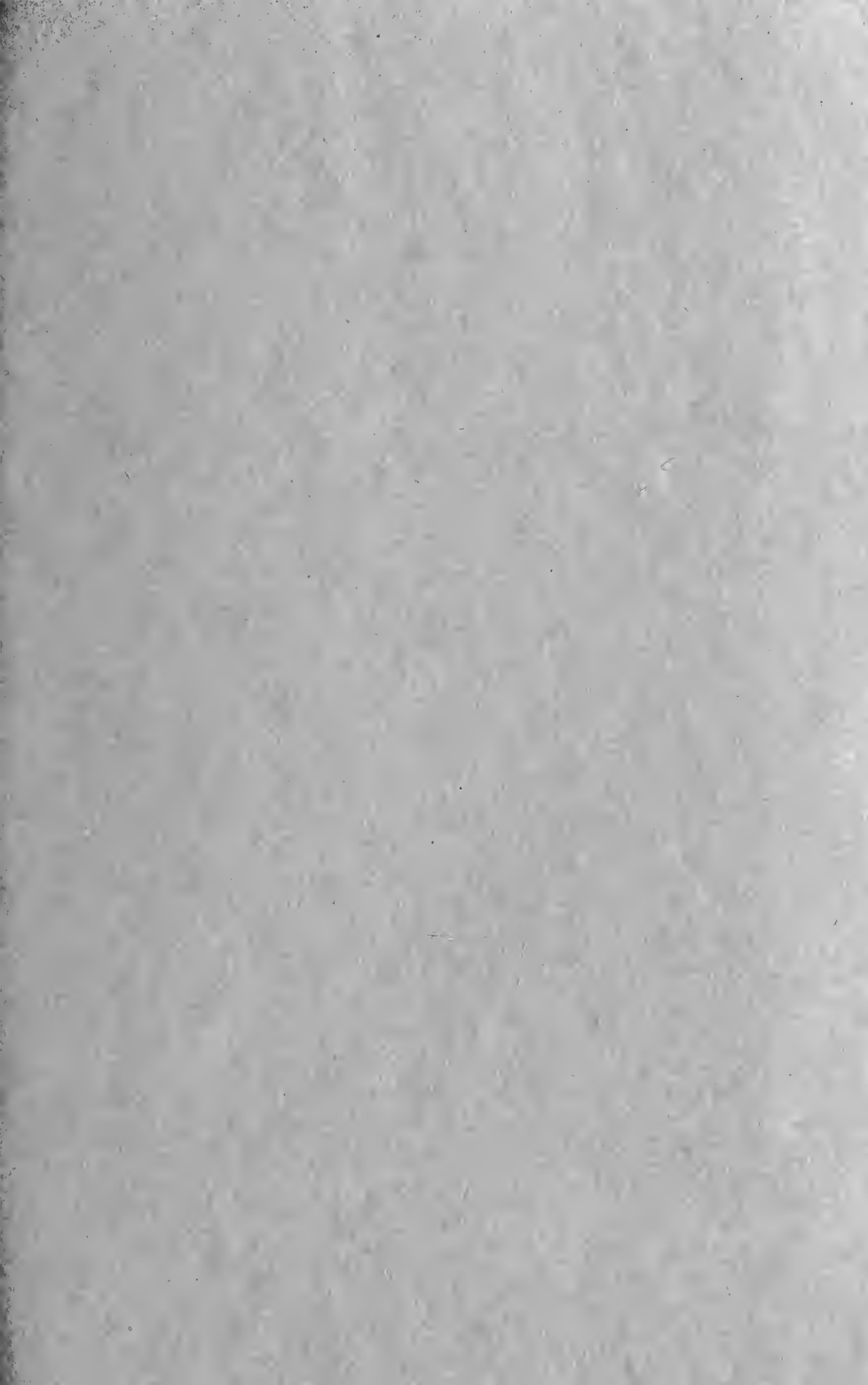
The course in Structural Drawing consists of making shop drawings of the various members of modern steel frames. After making drawings of structural sections and standard connections, the student is given data from which he makes framing plans and shop details. The problems usually covered are: portions of a steel frame building, a bridge girder, and a roof truss.

55. Surveying. (*Prerequisite, Engineering Mathematics*)

(a) A course of lectures, which treats the basic principles such as: taping, compass, theory and use of the transit as applied to both random and closed traverses, differential leveling, profile leveling, and double rodged leveling. The D.M.D. and rectangular coordinate methods (of computing, plotting and running traverses) are stressed and especially as they may apply to such work, or procedure as outlined by the Massachusetts Land Court.

(b) A continuation of Surveying (a), consisting of lectures and problems on: Stadia surveying, the theory and use of the plane table, plane, triangulation, simple curves (railroad curves and circular arcs), vertical curves, compound curves, and elementary earthwork problems.





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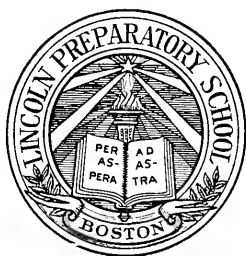
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Catalog for 1938-1939
THE FORTY-FIRST YEAR

"Education, of course, has an economic value, but better still, a cultural, moral and spiritual value. It helps to make a living, but what is more significant, it helps to make a life, to make life fuller, richer, more complete and more satisfying. Though it never add a penny to a man's wage, it will bring him 'Treasure Islands' whose value he cannot possibly compute. Every man is the better for an education, and every added hour of education he secures, enlarges for him the world in which he lives, and gives him in it a place of greater security and more profound blessedness. Hence my counsel to all young people: get all the education you can, make the best possible use of every educational opportunity that offers itself. You may not appreciate it now, but the day will come when your eyes will open and you will see, when on bended knees you will thank God that when you were young you sat at the feet of wisdom and quenched your thirst with its waters of salvation."

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CALENDAR

Summer Term, June, 1938-September, 1938

May 23-June 6	Registration period.
June 6	Classes begin.
June 17	Legal holiday. No classes.
July 4	Legal holiday. No classes.
September 5	Legal holiday. No classes.
September 12-16	Final examinations.

School Year, September, 1938-May, 1939

1938

September 12-26	Registration period.
September 26	Classes begin.
October 12	Legal holiday. No classes.
November 11	Legal holiday. No classes.
November 24	Thanksgiving Day. No classes.
December 23	Last session before Christmas recess.

1939

January 3	Classes resume.
February 22	Legal holiday. No classes.
April 19	Legal holiday. No classes.
May 15-19	Final examinations.

Special Winter Term, January, 1939-May, 1939

January 3-16	Registration period.
January 16	Classes begin.
February 22	Legal holiday. No classes.
April 19	Legal holiday. No classes.
May 22-26	Final examinations.

Summer Term, June, 1939-September, 1939

May 22-June 5	Registration period.
June 5	Classes begin.
July 4	Legal holiday. No classes.
September 4	Legal holiday. No classes.
September 11-15	Final examinations.

OFFICE HOURS

August 15, 1938-June 16, 1939

Week days, except Saturday	9 a.m. till	9 p.m.
Saturday	9 a.m. till	1 p.m.

June 19, 1939-August 14, 1939

Monday, Wednesday, and Thursday	9 a.m. till	4 p.m.
Tuesday and Friday	{ 9 a.m. till	4 p.m.
	{ 6 p.m. till	8 p.m.
Saturday	9 a.m. till	12 midday

INTERVIEWS

Prospective students, or those desiring advice or guidance with regard to any part of the school work or curricula, are offered without obligation personal interviews with the Principal or his assistants. No inquirer should hesitate to ask for an appointment as, in the long run, time is saved during the school year by having the whole educational problem discussed before the opening of the school.

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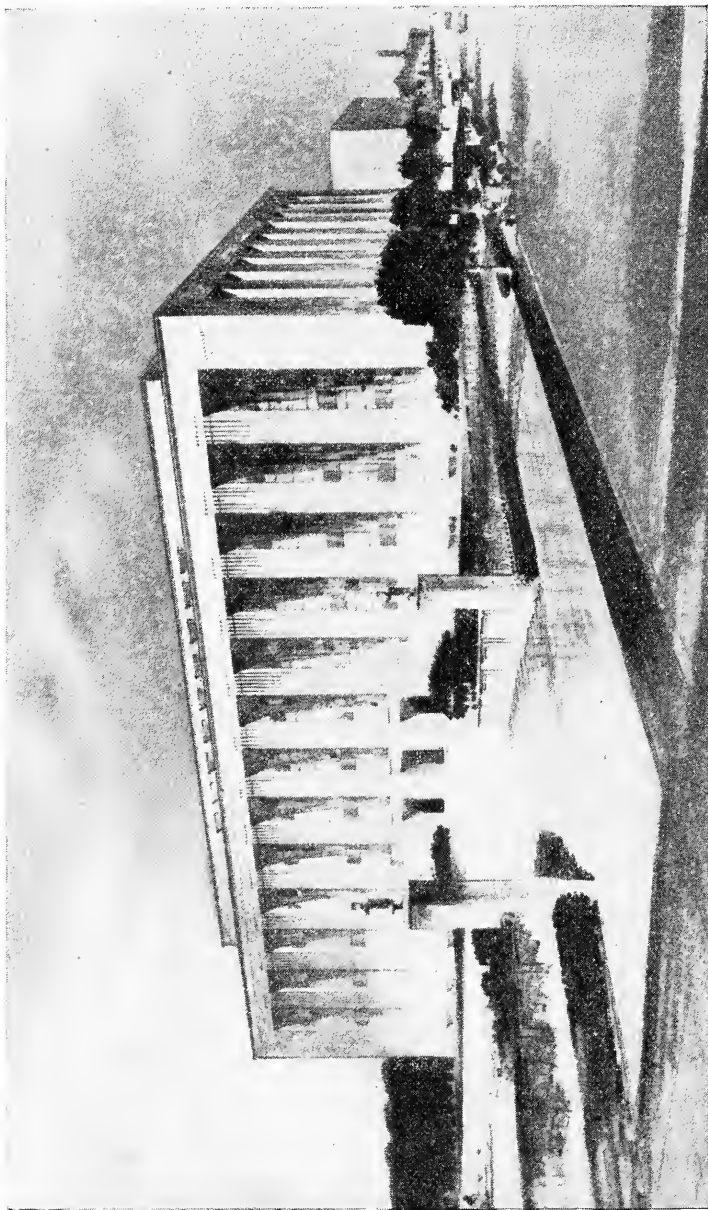
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Principal

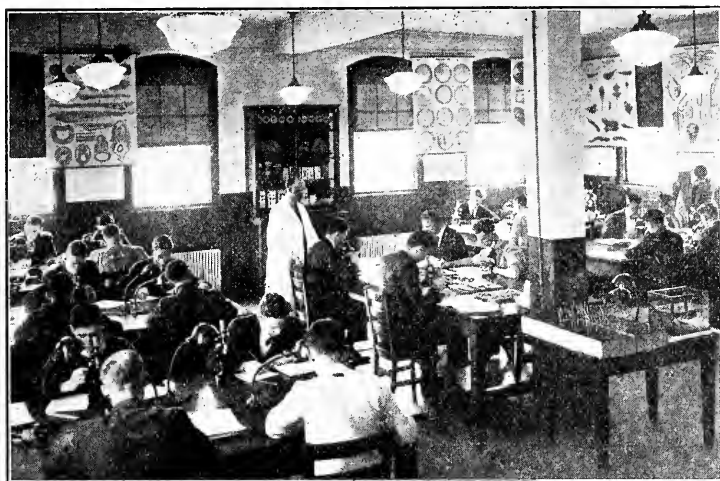
WILLIAM GREENE WILKINSON, A.B., ED.M.

Assistant Principal



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BIOLOGY LABORATORY



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FACULTY

WALTER ALFRED BALDWIN

Appointed 1910

A.B. Ohio Wesleyan University, 1906; graduate study University of Chicago and Harvard University; Head, Department of Mathematics, Chillicothe High School, Ohio, 1906-08; Head, Department of Mathematics, Mansfield High School, Ohio, 1908-10; Head, Science Department, Huntington School for Boys, Boston, 1912-14; Instructor in Physics and Chemistry, Lincoln Preparatory School 1910-.

Physics and Chemistry

THEODORE M. CHASE

Appointed 1937

B.S. Massachusetts State College, 1924; Ed.M. Harvard University, 1937; Instructor in Science, Franklin High School, New Hampshire, 1924-25; Instructor in Mathematics, Hebron Academy, 1925-27; Head of Mathematics Department, New Hampton School for Boys, 1927-35; Instructor in Mathematics, Huntington School for Boys, 1935-.

Mathematics

DANA MESERVE COTTON

Appointed 1936

A.B. University of New Hampshire, 1928; Instructor in Social Studies at Winchester High School, 1934-.

History and Economics

CHARLES LEE CHEETHAM

Appointed 1928

A.B. Bates College, 1911; A.M. Columbia University, 1927; Instructor in Mathematics, Portsmouth High School, New Hampshire, 1912-14; Submaster, Westerly High School, Rhode Island, 1915-17; Instructor in Mathematics and Science, Tower Hill School, Wilmington, Delaware, 1919-23; Instructor in Mathematics and Physics, Roger Ascham School, White Plains, New York, 1923-27; Instructor in Science, Mathematics and Physics, Public Latin School, Boston, 1928-.

Physics

PRESTON HARVEY

Appointed 1933

A.B. Bowdoin College, 1928; Instructor in Latin and History, Portland Country Day School, 1928-31; Head of Latin Department, Huntington School, 1932-.

Latin and History

PERCY EDWARD JONES

Appointed 1923

Sloyd Training School, 1920; B.S. Boston University, 1930; Instructor in Mathematics and Drawing, Huntington School for Boys, 1919-.

Mathematics

CHARLES J. KEELON

Appointed 1931

B.S. 1923, Ed.M. 1925, Boston University; Assistant Principal, Avon High School, 1925-27; Principal, Avon High School, 1927-29; English High School Junior Master, 1929-.

Mathematics

A. ROBERT KELMAN

Appointed 1930

B.B.A. Boston University, 1925; School of Education, Harvard University; Instructor, Quincy Senior High School, 1921-25; Instructor, Weaver High School, Hartford, Connecticut, 1925-26; Instructor, Bulkeley High School, Hartford, Connecticut, 1926-29; Head of the Department of Social Studies, The Senior High School, Watertown, 1930-.

Problems of Democracy — Sociology

ALFRED BLANCHARD KERSHAW

Appointed 1928

A.B. Amherst, 1904; A.M. Amherst, 1907; Instructor, The Allen School, West Newton, 1908-09; Instructor in English, Brockton High School, 1909-11; Submaster, English High School, Boston, 1911-.

English

STANLEY D. MIROYIANNIS

Appointed 1936

B.S. Northwest College, 1927; A.M. Massachusetts State College, 1928; Ph.D., Boston University, 1936; Instructor in Biology, Boston University, 1933-36; Head of Department of Biology, Northeastern University, 1936-.

Biology

JAMES HARRIS MORSS

Appointed 1927

A.B. Boston University, 1903; Ed.M. Harvard University, 1927; Instructor in Huntington School for Boys, Boston, 1915-.

English

THEODORE WOODS NOON

Appointed 1922

A.B. Yale College, 1896; M.A. Yale University, 1898; Exhibitioner, Emmanuel College, University of Cambridge, England, 1906-07; Master, Lawrenceville School, Lawrenceville, New Jersey, 1908-18; B.D. University of Chicago, 1913; S.T.M. Boston University, 1922; Ed.M. Harvard University, 1924; Instructor in Lincoln Preparatory School and Huntington School for Boys, Boston, 1922-.

Latin and Ancient History

DEANE STANFIELD PEACOCK

Appointed 1931

A.B. Bowdoin College, 1917; A.M. Bates College, 1927; Ed.M. Harvard University, 1932; Principal, Oakland High School, Maine, 1919-24; Principal, Freeport High School, Maine, 1924-31; Junior Master, English High School, Boston, 1932-.

English

FRED PARKER HAMILTON PIKE

Appointed 1921

A.B. Colby, 1898; Graduate study Johns Hopkins University, 1903-05; Instructor in Modern Languages in private preparatory schools, 1899-1908; Instructor in French, Public Latin School, Boston, 1909-.

French and German

B. FLOYD RINKER

Appointed 1929

A.B. Dickinson College, 1924; Ed.M. Harvard University, 1926; Instructor in English at Newton High School, 1928-.

English

CHARLES FREEMAN SEAVERNS

Appointed 1914

Harvard University, 1915-17; Instructor in Mathematics and Drawing, Huntington School for Boys, Boston, 1914-19; Instructor, Everett High School, 1925-.

Mathematics and Mechanical Drawing

ALFRED LORING SKINNER

Appointed 1927

A.B. Harvard University, 1919; Instructor in Mathematics, North Andover, Mass., 1919-22; Instructor in Mathematics, Huntington School for Boys, Boston, 1922-.

Mathematics

JOHN MOORE TROUT, JR.

Appointed 1936

A.B. Princeton University, 1928; Ed.M. Harvard University, 1932; Instructor at Huntington School for Boys, 1928-.

French

DANIEL P. A. WILLARD

Appointed 1925

B.S. University of New Hampshire, 1913; Principal, Edgartown High School, Mass., 1913-14; Submaster, Braintree High School, Mass., 1915-16; Instructor in Social Sciences, Newton High School, Mass., 1916-.

Social Sciences

EDNA M. EDISON, *Secretary*
HELEN E. HILDRETH, *Bookkeeper*
PRISCILLA C. HILL, *Recorder*

THE LINCOLN SCHOOLS

HISTORICAL STATEMENT

The Lincoln Schools, conducted by and affiliated with Northeastern University, include the Lincoln Technical Institute and the Lincoln Preparatory School. These Schools offer the non-degree-granting work conducted by Northeastern University.

All classes in the Lincoln Schools are held in the evening and are especially designed to meet the needs of those who are employed during the day.

The first of the Lincoln Schools to be established was the Lincoln Preparatory School, known for many years as the Northeastern Preparatory School. This School had its real beginnings in 1897 in the single courses offered in History, Science, and other subjects of a cultural nature, and in certain trade courses intended to benefit men engaged in various occupations.

Gradually the trade courses were discontinued and the remaining subjects were welded into a regular high school program, upon the completion of which a standard high school diploma was awarded.

The primary purpose of the School has been effective preparation of students for college entrance. For this reason constant attention has been paid through the years to the maintenance and improvement of standards.

In 1925 women were admitted to classes on the same basis as men. Since 1924 the School has been accredited by the New England College Entrance Certificate Board, a marked distinction in the case of an evening school, and an expression of confidence that day school standards are maintained. The school today offers curricula in the general, scientific, and classical fields. The enrollment has increased from fewer than fifty students to almost five hundred, of whom one-fifth are women. The faculty has been increased until it now numbers from twenty-five to thirty men of wide experience and training, drawn from the leading day preparatory and high schools of Metropolitan Boston.

Next in point of view of time was the Lincoln Technical Institute, which had its origin in the Northeastern Evening Polytechnic School. The latter received its title in 1901, when the work of various technical departments, such as the Department of Steam Engineering, the Department of Art, the Automotive School and the Department of Naval Architecture, were grouped together into curricula. By 1904 we find the School offering definite curricula, generally of three years' duration, in Architecture, Chemistry, Marine Engineering, Structural Engineering, Steam Engineering, along with courses in Art, Navigation, Surveying, Seamanship, and other related fields. In 1925 the title Lincoln Institute was given to the Northeastern Evening Polytechnic School. At this time the Lincoln Institute remodeled, lengthened, and conse-

quently improved the former courses, offering four-year curricula in Architecture, Chemistry, Civil Engineering, Electrical Engineering, Mechanical Engineering and Structural Engineering.

Since then, additional curricula have been added; namely, Aeronautical Engineering, Air Conditioning Engineering, and Diesel Engineering.

In addition, provision was made so that students need not pursue a complete curriculum but could elect individual courses related to their present occupations, the only prerequisite of entry being ability to pursue the course with profit to themselves. At the present time there are nearly five hundred students receiving instruction in the Lincoln Technical Institute in the various branches of engineering.

Since 1936 the curricular courses of the Institute have been credited by Northeastern University School of Business towards the Degree of Bachelor of Business Administration in Engineering and Business offered by that school.

The Officers of Administration are constantly alert to changing conditions and from time to time will modify existing courses to meet new needs and develop new courses so that real educational opportunities will be available to employed men and women at convenient evening hours. In particular they are sincerely interested in the problems of each student and are available for vocational and educational guidance. Through the Lincoln Schools many men and women have been able to solve their problems and to secure that education which has enabled them to succeed in the work for which they are adapted by ability and interest. Without the facilities of the Lincoln Schools many of these alumni would still be occupying minor positions with little opportunity for advancement on account of lack of training.

THE INTEREST IN EDUCATION

The following items show the growth of our school population and the increasing interest in education at all age levels. They are the most recent figures available and are issued by the Office of Education, United States Department of Education.

30,550,000
Number of students in all full-time schools and colleges.

23,570,000
77.5%
Number of students in elementary schools.

5,590,000
18.8%
Number of students in high schools.

1,150,000
3.7%
Number of students in colleges.

In other words, 22.5 per cent of our total school population is in high school or college.

There are in the country 69,000,000 persons over twenty-one years of age. Following is the division of these persons according to the extent of their education.

College graduates	2.14%
Some college work	4.55%
Illiterate	7.10%
Elementary school work	61.13%
Some high school work	18.86%
High school graduates	6.22%
	<u>100.00%</u>

This means that 30.77 per cent of these persons have had more than elementary school training and that 12.91 per cent or 14,464,854 are high school graduates or have even higher educational qualifications.

The figures at various age levels are interesting and informative.

The population at the last census was distributed as follows:

Age 20-24	10,870,378	Age 30-34	9,120,421
25-29	9,833,668	35-40	11,298,815

Population between ages 20-40	41,123,282
Number of high school graduates	12,254,994
Number of college graduates	2,209,960
High school graduates between 20-40	29.8%
College graduates between 20-40	5.3%

Hence it can be seen that out of every one hundred persons between the ages of twenty and forty, thirty are high school graduates and five are college graduates. This means that if a man is not a high school graduate and is now competing with *only three other men* for a position, one of those men at least is superior in formal educational qualifications.

EVENING EDUCATION AVAILABLE

The significance of the facts given above cannot be ignored. They imply that every person who does not have a high school education should take immediate steps to obtain one. While competition for the better jobs is already severe, it will be even more severe in the future.

Prior to 1905 only 10 per cent of the people of high school age were enrolled in high schools. It is estimated that in 1935 there were 7,000,000 or *70.4 per cent of people of high school age enrolled in the secondary schools.*

There seems little doubt that education is valuable. The most recent survey made in the State of Massachusetts has indicated beyond any doubt the value of a high school education, especially in the case of the most recent graduates. It is further indicated that employers are seeking at least the equivalency of a high school education as a minimum qualification in all prospective employees.

For those whose high school education was disrupted for financial reasons or other factors beyond their control, it is pleasing to know that evening educational opportunities are now available and that it is possible for ambitious men or women to obtain a high school education at convenient evening hours. Moreover, this high school education will open to them the opportunity of meeting the minimum qualifications for entering upon the study of Engineering, Business, or for the pursuit of a liberal education. Classes in all these fields are now offered at convenient evening hours. However, even if one is not disposed to continue his studies in the professional field, it is almost imperative that immediate steps be taken at least to complete an education to the limits of formal high school training.

LINCOLN PREPARATORY SCHOOL

In Metropolitan Boston the Lincoln Preparatory School provides an opportunity to men and women of all ages and occupations to discuss their whole educational problem with a school officer and embark on an educational program suited to individual needs and ambitions. Furthermore, all this may be done at convenient evening hours, *without the necessity of leaving one's present employment.*

It also prepares students for admission to colleges and universities by certificate or examination and has already sent to various higher institutions hundreds of men and women who for financial and other reasons could not complete their high school preparation in a day school.

It provides an opportunity to men and women of all ages and occupations to obtain at convenient evening hours a thorough secondary school training which gives them a sound general education.

It offers to women thorough preparation for entrance to the training schools of recognized hospitals, since the School is recognized by the State Board of Registration in Medicine.

The School has been in operation since 1898 and since 1924 has enjoyed the privilege of being on the accredited list of the New England College Entrance Certificate Board, a distinct honor in the case of an evening school.

The faculty prides itself on the personal element it infuses into its work and makes every effort to deal with the individual student's problem. There is no obligation whatever in making an appointment for the full discussion of a student's education problems. Interviews are welcomed. The School is not operated as a business enterprise and conducted for profit, as are many private schools, but is part of a University system which devotes all of its resources and energies to serving its students effectively.

Recognizing the need for an educated democracy, the Lincoln Preparatory School endeavors to be of service to a large number of men and women who have been deprived of educational opportunities or who wish to undertake further study. For this reason fees are kept as low as possible, consistent with sound educational procedure, and courses have been arranged so that almost all educational needs of prospective students can be adequately met.

No student who has an educational need should hesitate about entering the Preparatory School because of age. The ages of the students range from fifteen to forty-nine. The School is specifically designed for adults, and results indicate the educational success of students regardless of age.

AIMS OF THE SCHOOL

The aims of the Lincoln Preparatory School may be classified as follows:

- (a) The offering of educational opportunities to men and women by methods of instruction carefully adapted to the needs of adult students.
- (b) The providing of this instruction at convenient evening hours, so that the student need not leave his or her present employment while obtaining an education.

- (c) The conducting of the school work on such a high qualitative plane that those students who wish to prepare for college may be adequately prepared for entrance examinations, or for entrance on certificate if their ability and performance warrant.
- (d) The offering of a general program to those who do not plan to enter college, that they may develop a taste for the better things in life and that they may advance to a larger personal growth.
- (e) The selection of the most competent and experienced faculty available.
- (f) The maintenance of the excellent work which has earned for the School the approval of the New England College Entrance Certificate Board.
- (g) The personal interest of every school officer in the individual problem of the student.

ALUMNI

The Alumni of the Lincoln Preparatory School are excellent witnesses of the work the School has done and is doing. One of our greatest rewards is the satisfaction of receiving from our former students, in the form of letters and personal visits after they have left school, their thanks and appreciation for our efforts.

Many women who graduated from this School are in the hospital training schools of the State or have graduated therefrom. Some occupy teaching and administrative positions in our hospitals. Many more of our students are in colleges and professional schools scattered across the country.

The following are some of the colleges that have been attended by Alumni of the Lincoln Preparatory School:

Harvard University	Simmons College
Tufts College	University of Maine
Massachusetts Institute of Technology	Clark University
Boston University	Massachusetts State College
University of Michigan	University of Chicago
Jackson College	Syracuse University
Purdue University	Yale
University of Alabama	Dartmouth
University of Maryland	Bowdoin
Columbia University	Bates

In addition, our graduates are engaged in the various professions, such as Law, Medicine, Teaching, and Dentistry. Lastly, many are engaged in successful business activities and in public life.

Furthermore, the School has been of benefit to many who did not complete our graduation requirements but obtained here the credits necessary for college entrance or for some other specific purpose, having completed elsewhere part of their high school training.

FACULTY

In an evening school it is particularly essential that none but men of wide experience and high ideals be appointed to the faculty. Accordingly the faculty of the Lincoln Preparatory School has been very carefully chosen, all its members having been educated in the leading colleges and universities. They are men of culture and high ideals who are in sympathy with evening school students and understand their aims. They have had excellent training and wide experience in the subjects which they teach. Most of them have served with the institution for many years, and as a result of their personal devotion to the cause of education and their appreciation of the work this School is attempting, are naturally interested in its aims and success. The average length of the teaching experience of faculty members is twenty years. All of them are at present employed in the high and preparatory schools in Boston and vicinity or are engaged in graduate study.

STUDENT BODY

The students of the Lincoln Preparatory School are men and women of earnest purpose, who have come to recognize the value of education but who through force of circumstances have been unable to complete a high school course. The ages of the students range *from fifteen to forty-nine* with the average *age twenty-four*. This fact proves conclusively that at all ages educational opportunities may be used to increase personal satisfaction through the development of a taste for the better things in life or to bring about material advancement and increased financial rewards. Some students are attempting to increase their vocational opportunities; some are completing a high school education begun elsewhere but interrupted; some are beginning here their high school work; some are adding to their training cultural or practical subjects which were formerly omitted from their training. In fact, the School is ready to serve students of all ages at a point where they need real service.

The student body represents also men and women from all walks of life, as may be seen from the occupational distribution given below.

OCCUPATIONAL SURVEY

Among the occupations of the student body enrolled for the school year 1937-38 the following are representative:

Accountant	Helper	Radio Worker
Apprentice	Houseboy	Railroad Employee
Auditor	Housewife	Recreation Leader
Banking	Insurance	Repairman
Bookkeeper	Jobber	Salesgirl
Brewer	Journalist	Salesman
Candy Manufacturer	Laborer	Secretary
Carpenter	Laundryman	Shipper
Chauffeur	Library Worker	Shoe Worker
Chemist	Machinist	Social Service
Clerk	Maid	Soldier
Cook	Medical Worker	Stenographer
Credit Manager	Messenger	Stock Work
Dental Assistant	Nurse	Store Manager
Draftsman	Office Manager	Student
Electrician	Optical Worker	Supervisor
Elevator Operator	Orderly	Technician
Engineer	Painter	Textile Worker
Factory Worker	Paymaster	Timekeeper
Farmer	Pipefitter	Truck Driver
Furrier	Podiatrist	Typist
Gardener	Porter	Waiter
Gasoline Station Attendant	Printer	Waitress
Grocer	Production Agent	Welder
Hairdresser	Quarry Worker	

GEOGRAPHICAL SURVEY

The following list indicates the areas from which the students of the school year 1937-38 came.

Allston	Gloucester	Newtonville
Arlington	Haverhill	Norwood
Attleboro	Hopkinton	Peabody
Belmont	Hull	Quincy
Beverly	Hyde Park	Revere
Boston	Jamaica Plain	Roxbury
Braintree	Lawrence	Salem
Brighton	Lexington	Somerville
Brookline	Lowell	South Acton
Burlington	Lynn	Swampscott
Cambridge	Malden	Waban
Canton	Marblehead	Wakefield
Charlestown	Marlboro	Waltham
Chelsea	Mattapan	Watertown
Danvers	Maynard	Waverley
Dedham	Medford	West Roxbury
Dorchester	Melrose	Weymouth
East Boston	Methuen	Winchester
Everett	Millis	Winthrop
Forest Hills	Milton	Woburn
Framingham	Newton	Wollaston

INFORMATION REGARDING ADMISSION

ADMISSION REQUIREMENTS

Any man or woman of good moral character, regardless of occupation, race or creed, who has completed at least six grades of a grammar school, or the equivalent, may enroll in the School.

Courses adapted to the needs and education of such applicants are offered each term. It is not advisable, however, for one younger than fifteen years of age to register, for the courses are adapted to those who are more mature and are physically able to work during the day and to study at night.

Students who do not intend to enter higher institutions of learning may select from the offering of courses a special combination of subjects which will benefit them in the work in which they are engaged during the day. Before enrolling for such subjects, students are urged to see the Principal, explaining the particular nature of the employment in which they are engaged, so that he can arrange the course best suited for their needs. Special combinations of courses may be selected to embrace business, science, or special technical work.

APPLICATIONS FOR ADMISSION

Applications for admission should be filed as early as possible in order that the necessary investigations may be made and the status of each student definitely determined before the opening of the term.

CREDIT FROM OTHER SCHOOLS

Students who have completed high school work in other approved institutions may obtain credit for that work towards the diploma of this School by presenting a certified transcript of record from the school previously attended.

The officers of the School are glad at all times to obtain for prospective students transcripts of their records of work at other schools, evaluate such records in terms of diploma credits and suggest a program, indicating the cost of the program and the time necessary to meet graduation requirements.

LATE REGISTRATION

Students should avoid late registration. It is of fundamental importance that they be present at the first class sessions if they are to be successful in their studies for the year. Those who find it necessary to register late may be permitted to enter the School provided they have not lost so much work as to render it impossible for them to proceed with the courses.

TUITION AND OTHER FEES

FULL COURSES

Registration Fee. \$5 is payable by all students on their initial entrance to the School.

This is not returnable except where a student is refused admission.

Tuition Fees. One subject \$30 (one-half payable at registration; one-half payable at mid-term).

Two or more subjects \$30 per subject (payable in equal monthly installments throughout the duration of the term).

For students entering in September the duration of a full course is 32 weeks. During the winter and summer terms, however, the courses are abbreviated to 20 weeks and 16 weeks respectively, but the work is carried on more intensively and the same ground is covered, primarily by means of a longer period in the classroom. Hence, all charges are on a course basis; that is, the cost for every full course is \$30, regardless of the term in which it is taken.

HALF COURSES

One subject \$15 (payable on registration).

Two or more subjects \$15 per subject (payable in equal monthly installments).

The duration of a half course is usually 16 weeks during the fall and winter terms; 12 weeks during the summer term.

SPECIAL RATES FOR SCIENCES

BIOLOGY	\$40.00	PHYSICS	\$40.00
Laboratory Fee . .	10.00	Laboratory Fee . .	5.00
CHEMISTRY	\$40.00		
Laboratory Fee . .	5.00		
Deposit	5.00		

The unused portion of the chemistry deposit is refunded after deduction for breakages.

No reduction in fees is made because of late enrollment.

CHARGES FOR PARTIAL ATTENDANCE

In the event of a student's withdrawal from school, he is charged on a *pro rata* basis for the weeks he has attended. These charges are as follows:

32-week courses — 4% of the total charges for each week of attendance.

20-week courses — 6% of the total charges for each week of attendance.

16-week courses — 8% of the total charges for each week of attendance.

The same charges are applicable in the event that a student abandons a part of his program. In addition the full Laboratory Fee is charged in those cases where a student is pursuing a laboratory course.

MISCELLANEOUS FEES

The fee for a condition or make-up examination regularly scheduled is \$3.

The fee for a make-up quiz regularly scheduled is \$1.50. The diploma fee is \$3.

CHARGES FOR DAMAGES

Students who damage apparatus in the laboratories or who willfully destroy school property will be responsible for the replacement of such damaged articles or for the cost of replacing where this is undertaken by the School.

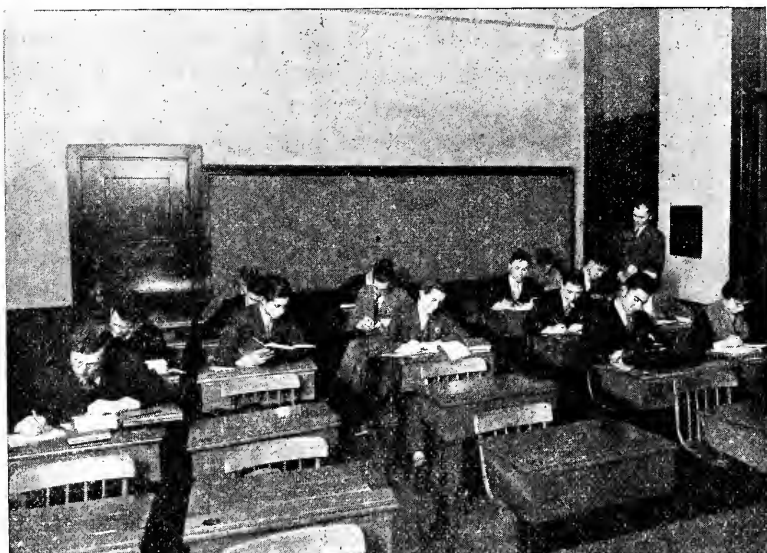
REFUND POLICY

Students who are forced to withdraw from a course or from the School are expected to notify the school office by completing the withdrawal blanks which will be furnished.

Since the School assumes the obligation of carrying the student throughout the year for which he registers, and since the instruction and accommodations are provided on a yearly basis, the Executive Council has ruled as follows:

- A. *Applications for refunds must be presented within forty-five days after withdrawal from school.*
- B. Refunds in the case of complete withdrawal from school will be granted by the Committee on Withdrawals for reasons which they deem adequate. Among the reasons deemed adequate are the following:
 - (a) Personal illness.
 - (b) Change of employment by direction of employer, whether in the schedule of time or in place of employment.
 - (c) The situation where the student becomes the sole or partial support of the family, so as to make it impossible for him to continue his studies.
 - (d) Loss of position.
 - (e) Change of residence.
 - (f) A voluntary change of employment, the hours or the residence being such that he is unable to continue attendance.

In all the above cases it is expected that a medical certificate, letter from employer, or other appropriate substantiating documentary evidence will be produced by the student.



ONE OF THE CLASSROOMS



ONE OF THE CLASSROOMS

ADMINISTRATIVE REGULATIONS

SCHOOL YEAR

Students may begin classes at three distinct times in the school year: September, January, and June, and select courses suited to their individual advancement. Students entering in September carry a program which lasts until May; students entering in January attend from January to May; and there is, in addition, an intensive summer course of sixteen weeks from June to September. The work is so conducted that in any of the three periods mentioned above the student may complete a full year of high school work in any subject. By attending full calendar years, a standard four-year high school course may be completed in from three to five years, according to the number of subjects studied by the student. For details regarding program see page 23.

SESSIONS

The school sessions are held on week-day evenings between seven and ten o'clock. There are no classes on Saturdays. A student's schedule may include one, two, or three evenings a week, according to the subjects he selects. *As a rule, subjects are scheduled for two evenings a week.* A full-year course requires attendance for one hour, two evenings a week, during the normal school year, or requires attendance for an hour and a half, two evenings a week, during the winter and summer terms. Half courses are generally completed within each semester, each usually requiring attendance for one hour, two evenings a week.

EXAMINATIONS AND QUIZZES

Examinations are held throughout the term at the discretion of the instructors. Final examinations are required upon the completion of all courses. The following system of grading is used:

A Excellent	C Fair	E Conditioned
B Good	D Pass	F Failure

A student marked E (conditioned) may enroll in the advanced course in the same subject immediately following, but upon condition that he remove his deficiency by special examination early in the next term. A fee of \$3 is required for each such examination regularly scheduled.

A student receiving the grade of B is exempt from examination when applying for admission to the colleges composing the New England College Entrance Certificate Board. A list of these colleges is given on page 25.

TRANSFERS

Students are not permitted to change from one course to another without first consulting the Principal and receiving a Transfer Order signed by him.

REPORTS OF STANDING

An informal report of the student's standing is issued at the end of the first term; and the formal report, covering the year's record, is issued at the close of each year.

In the case of students who are under twenty-one years of age, reports may be sent to parents in the event of unsatisfactory work on the part of the student, non-compliance with administrative regulations, continued absence, and withdrawal. Parents of minors may obtain reports at any time on request.

ATTENDANCE REQUIREMENTS

A careful record of attendance upon class exercises is kept for each student. Absence from regularly scheduled classes on any subject will seriously affect the standing of the student. It may cause the removal of certain subjects from his schedule and the listing of these as "conditioned subjects." However, if reasonable excuse for absence be presented, the student may be allowed to make up the time lost, and be given credit for the work; but he must complete the work at such time and in such manner as his instructor in the course shall designate.

A minimum attendance record of 75 per cent must be maintained in all classes before a student will be admitted to examination.

NOTIFY THE OFFICE IMMEDIATELY

- (a) Of any change of address;
- (b) Of withdrawal from any course — otherwise the fee for that course will be charged;
- (c) Of withdrawal from the School — giving the date of the last lecture attended.

INFORMATION REGARDING PROGRAM AND GRADUATION REQUIREMENTS

THE UNIT SYSTEM EXPLAINED

Frequent reference is made in this catalog to "units" and that there may be no misunderstanding in the minds of students, this explanation is offered. A unit of high school credit is given upon the satisfactory completion of the work of one school year in a single standard subject, the equivalent of which is covered by this School in thirty-two weeks or in the intensive courses of twenty and sixteen weeks offered in the winter and summer terms respectively. The following exceptions are to be noted: Four full courses in English total three units towards graduation or towards college entrance: Algebra 2, although a sixteen-week course, carries one unit of credit towards graduation.

TERMS AND HOURS OF ATTENDANCE

When assigning a program for a student the school officers usually assign work which requires attendance for *only two evenings a week*.

All classes are scheduled to meet between the hours of 7 and 10 p.m.

Each term a schedule is prepared listing the courses to be offered and the hours at which they meet. A copy may be obtained on request.

Following is the general arrangement for the completion of a course in each term of the school year.

FALL TERM (32 WEEKS)

One full-unit course requires attendance for one hour twice a week. Students may carry one, two, or three courses during this term.

WINTER TERM (20 WEEKS)

One full-unit course requires attendance for one and a half hours twice a week. Students may carry one or two full-unit courses during this term.

SUMMER TERM (16 WEEKS)

One full-unit course requires attendance for one and a half hours twice a week. Students may carry one or two full-unit courses during this term.

COURSES OF STUDY

List of Courses Offered

Algebra 1	German 1
Algebra 2	German 2
*Biology	Government
*Chemistry	History A (Ancient)
Economics	History B (European)
English 1	History C (English)
English 2	History D (U. S.)
English 3	Latin 1
English 4	Latin 2
French 1	Latin 3
French 2	Latin 4
French 3	*Mechanical Drawing
Geometry (Plane)	*Physics
Geometry (Solid)	Trigonometry

* These courses meet only once a week in the fall term; all other courses meet twice a week, usually on Tuesdays and Fridays.

HOW TO PLAN YOUR PROGRAM OF CLASSES

In choosing subjects each term students should bear in mind:

- (a) The requirements for graduation from the Lincoln Preparatory School. These are given on page 27.
- (b) The admission requirements of the higher institution they wish to enter. Catalogs of most colleges are on file at the school office. In case of doubt, consult these and talk with the Principal.
- (c) The special requirements for various professions and vocations.
- (d) Their special interests, in the event that courses are chosen from the cultural point of view.

It is especially important to meet the requirements for graduation so that a diploma may be obtained. Most colleges not only require fifteen units of high school work, but also insist that the student be a graduate of a recognized high school. Moreover, in business and in everyday life it means infinitely more to say one is a high school graduate than merely to say one has completed fifteen units of high school work.

HOW LONG WILL IT TAKE TO OBTAIN A DIPLOMA?

The flexible schedule and the twelve months' operation of the Lincoln Preparatory School enable a student to save considerable time. The exact time that it will take to obtain a diploma is

dependent upon credit from former institutions attended, hours available for study, and the number of courses pursued. A student who begins his high school work in the Lincoln Preparatory School can complete his course in from three to five years. However, it is urged upon students that *a high school education is a matter of accomplishment and not a matter of time*, and the School insists on a high standard of accomplishment.

ADMISSION TO COLLEGE

Since the Lincoln Preparatory School offers a regular course for those who wish to enter college, a student, according to his record and his plan of procedure, may enter college in one of the following ways:

- (a) **By diploma.** Certain colleges will admit students on the diploma from this School. Among these colleges are all those that accept a standard high school diploma.
- (b) **By examination.** A few colleges, notably Harvard, Yale, and the Massachusetts Institute of Technology, require certain examinations from all candidates. This School prepares students for all college entrance examinations and for the examinations of the College Entrance Examination Board.
- (c) **By certificate.** The School is accredited by the New England College Entrance Certificate Board. Some of the colleges which accept the certificate of this School are Amherst, Bates, Bowdoin, Colby, Massachusetts State College, Clark, Middlebury, Tufts, Wesleyan, and Williams. Generally speaking, *institutions that accept students by the certificate method will accept the certificate of this School. The certificate grade is 80 per cent.*



PHYSICS LABORATORY



CLASS IN MECHANICAL DRAWING

REQUIREMENTS FOR GRADUATION

The diploma of the Lincoln Preparatory School is granted on the completion of fifteen units of work, of which at least four must have been earned in the Lincoln Preparatory School. In addition, each student must have completed in this School or elsewhere the required subjects for the diploma for which he is a candidate.

CURRICULA

COLLEGE COURSE DIPLOMA

A. For admission to Liberal Arts Colleges.

This course prepares for most colleges that offer the degree of Bachelor of Arts.

Required:

	Units
College Preparatory English.....	3
Algebra.....	2
Plane Geometry.....	1
French, or German, or Spanish.....	2
Physics, or Chemistry, or Biology.....	1
United States History.....	1
Latin, or Greek.....	2
	<hr/>
	12

Elective:

The remaining three units may be selected from the following:

	Units
Spanish.....	2 to 3
Latin.....	1
French.....	2 to 3
European History.....	1
Ancient History.....	1
Solid Geometry.....	$\frac{1}{2}$
Trigonometry.....	$\frac{1}{2}$
Chemistry, or Physics, or Biology.....	1

One unit of a foreign language is not acceptable for credit.

Language and Mathematics requirements vary somewhat for entrance to the different colleges: This is especially true of the Latin requirements. Some colleges require three entrance units in either French or German. *It is the student's responsibility to meet the requirements of the college he elects to enter.*

In addition, other electives may be permitted by special consent provided they are acceptable by the college to which the student seeks entrance.

B. For admission to Scientific Colleges.

This course is for those who contemplate entrance to institutions offering the degree of Bachelor of Science.

Required:

	Units
English.....	3
French, or German, or Spanish.....	3
Algebra.....	2
Plane Geometry.....	1
Physics, or Chemistry.....	1
United States History.....	1
Trigonometry and Solid Geometry.....	1
	<hr/>
	12

Language and Mathematics requirements vary somewhat for entrance to the different colleges. *It is the student's responsibility to meet the requirements of the college he elects to enter.*

Elective:

Subjects may be selected from either the Required or Elective List of the Classical Course to make up the necessary fifteen units.

One unit of a foreign language is not acceptable for credit.

GENERAL COURSE DIPLOMA

The General Course offers a general education and also, *if the right selection of subjects is made*, enables students to enter certain colleges. A wide selection of subjects is possible but choice of many college preparatory subjects should be made.

Required: Five Units

	Units
English.....	3
United States History.....	1
Physics, or Chemistry, or Biology.....	1
	<hr/>
	5

Limited Electives: (choose one option) Three Units

Mathematics Option

Algebra 1 and 2	
Plane Geometry.....	3
or	

Algebra 1	
Plane Geometry	
Physics.....	3
(When Chemistry or Biology has been taken as a required subject)	

Language Option

Three units of any one of the following or two units of any two:
French, Latin, German, and Spanish..... 3 or 4

Social Science Option

Economics, Government, English History, Ancient History, European History, etc.....	3
---	---

Free Electives: Seven Units

Any standard high school subjects to complete total of 15 units.

One unit of a foreign language is not acceptable for credit.

SPECIAL PROGRAM FOR CANDIDATES FOR THE NURSING PROFESSION

The State Board of Registration in Medicine and the Board of Registration for Nurses have ruled that a high school education or its equivalent is a prerequisite for admission to hospital training schools.

The high school certificate must show the completion of fifteen units accepted by the high school in meeting graduation requirements. These fifteen units are to be as follows:

Required (6 units)

- | | |
|---|---------|
| 1. English (4 years) | 3 units |
| 2. U. S. History | 1 unit |
| 3. Mathematics (Algebra and Plane Geometry) | 2 units |
| or | |
| Science (General Science, Chemistry,
Physics, and Biology) | 2 units |
- One unit of each group will not be accepted.

Limited Electives (6 units selected from the following)

- | | |
|--|---------------------|
| 1. Foreign Modern Language | 2, 3, or 4 units |
| 2. Greek or Latin | 2 or 3 units |
| 3. Mathematics (Algebra, Plane Geometry,
Arithmetic, etc.) | 1, 2, 3, or 4 units |
| 4. Science (Biology, Physics, Chemistry, etc.) | 1, 2, 3, or 4 units |
| 5. Social Studies (History, Economics, Gov-
ernment, Civics, etc.) | 1 unit |
| 6. Commercial Subjects (Commercial Geog-
raphy, Business Law, Shorthand including
typewriting, etc.) | 1 unit |
| 7. Practical Arts (Home Economics, Dietetics,
Domestic Science, etc.) | 1 unit |

Free Electives (3 units)

These three units may consist of any work which the high school accepts as meeting its graduation requirements.

An officer of the School will be glad to arrange a program so that these electives will be judiciously chosen, not only to aid the student in the subsequent subjects, but to meet the requirements of other States with whom a reciprocal arrangement exists with the State of Massachusetts.

For those already engaged in the profession of nursing, attention is directed to facilities which are available to those who have

not completed a high school education in accordance with the above demands. New regulations have been formed regarding institutional promotion and regarding teaching and administrative positions in hospitals, and while such legislation is not retroactive, it will certainly prove helpful to those who already occupy such positions to be adequately equipped for advancement and promotion in the event of transfer.

The work conducted by the Lincoln Preparatory School is acceptable to Massachusetts hospitals and to the State Board of Registration in Medicine.

GENERAL INFORMATION

LIBRARIES

The School has excellent facilities for study in the Northeastern University library and reading room, which is equipped with dictionaries, encyclopedias, and special texts for carrying on the work of the School effectively.

Students also have the privilege of taking books from the Boston Public Library and of using the library for general reference and reading.

TEXT BOOKS AND SUPPLIES

The Lincoln Preparatory School enjoys the facilities of the Northeastern University Bookstore, which is a department of the University and is operated for the convenience of the student body. All books and supplies which are required by the students for their work in the University may be purchased at the Bookstore.

RAILROAD TICKETS

Vouchers for half-fare tickets on the Boston Elevated Railroad are issued by the school office on the first, sixth, and eleventh Fridays of each term. The railroad systems entering Boston issue student's tickets to students under twenty-one years of age. Applications for these may be obtained at a railroad office and presented at the school office for signature.

OPPORTUNITIES FOR RECREATION

Men who are employed in offices or indoor occupations and who are pursuing a strenuous evening program of study should plan to take some systematic form of exercise in order that they may not impair their health and that they may do the most effective work.

The Lincoln Preparatory School is particularly fortunate in being able to place at the disposal of its students at moderate rates the recreational advantages of the Y. M. C. A. The Association building has facilities in the nature of a gymnasium, swimming pool, bowling alleys, billiard room, game rooms and social room, where students may obtain recreational privileges to their liking. Students may come from their work at the close of the day and enter a gymnasium class, take a swim, use the bowling alleys, or engage in other recreational pastimes before class time and thus revive their energy for the evening's work.

In addition, in the program of the Young Men's Christian Association will be found ample opportunities for religious, club, and other social activities.

VISITORS

Visitors are always welcome at one class session in any department. Those who wish to visit any of the classes should call at the school office and obtain a visitor's card signed by the Principal.

INTERVIEWS AND EDUCATIONAL GUIDANCE

Prospective students or those desiring advice or guidance with regard to any part of the school work or curricula, or who wish assistance in the solution of their educational problems, should note the fact that interviews are available without obligation, and that the officers of the School will do their utmost to see that a program is designed which is the most satisfactory for the individual student. In certain cases, other institutions may be recommended which suit the student's needs better. Furthermore, it is important that those with educational problems to solve should realize the necessity for care in approaching educational work so that the program selected will be on the best educational basis.

LOCATION OF SCHOOL

The Lincoln Schools, including the Lincoln Preparatory School, are affiliated with Northeastern University and have the privilege of using the facilities of the University. The work is conducted in three buildings. The main building, known as the West Building, is in process of construction opposite the Boston Opera House and will be available for use after August 1, 1938, and will contain the headquarters of the School. This building has a hundred thousand square feet of space and is adequately equipped with classroom and laboratory facilities. Certain classes are held in the Y. M. C. A. Building on Huntington Avenue where, too, there are classrooms and chemical laboratories. The third building used by the School is the South Building of the Northeastern University group and is situated in the rear of the Y. M. C. A. Building and contains classrooms and electrical and biological laboratories.

The School is easily reached from the North and South Stations, from the various points of the Boston Elevated System, and by automobile. Ample parking facilities are available in the rear of the Y. M. C. A. Building.

SCHOLARSHIPS

The Executive Council has made available a few scholarships to assist needy students of good mental capacity who because of financial limitations might be deprived of educational opportunities. These scholarships when awarded usually meet one-half of a student's tuition charges for the year.

OUTLINES OF COURSES

Note: The courses of the School are arranged in "units."

A unit is ordinarily the amount of work covered in a single subject taken four or five times a week for a year in a standard day high school.

In this School a unit may be covered in each subject in thirty-two weeks. See page 23 for explanation of unit system.

Students carry one, two or sometimes three subjects at a time. Fifteen units, properly selected (see pages 27 and 28), are required for graduation.

The high school courses described below are the equivalent of similar courses offered in a standard day high school.

The Lincoln Preparatory School reserves the right to change the arrangement of courses, the requirements for graduation, tuition fees, and other regulations affecting the students. Such regulations will affect both old and new students.

ENGLISH

The fundamental purposes of the department are to give the student efficient training in grammar in order to afford a sound basis for correct speech and writing; to instill correct principles of constructing sentences and paragraphs; to help him enlarge his vocabulary and to acquire an interest in words; to train him in the elements of logic as related to the organization and expression of thought; to teach him how to study; to impart an elementary knowledge of the types and the history of English literature; and to aid him in forming a taste for good literature and a genuine appreciation thereof.

English 1. This course is designed to bridge the gap between grade and high school English. Fundamentals of English grammar, the correct sentence, the more important rules of spelling and punctuation, simple compositions — especially the letter — and an introduction to literary selections as models for voluntary reading are presented.

English 2. This course marks the beginning of a more intensive study of English, both as a tool and as literature. Functional grammar, development of the paragraph, careful planning of themes, and a beginning of the critical study of literary forms, both poetry and prose, form the basis of the course.

English 3. This is an advanced course in composition including précis-writing and the structure of paragraphs and sentences. There is a rapid review of grammar and punctuation. The essay, the drama, the novel, and types of poetry are studied.

English 4. This is a college-preparatory course in composition and literature, with a thorough review of the fundamentals. Special attention is paid to the requirements of the College Entrance Examination Board.

LATIN

Exercises in translation at sight begin with the first lessons in which Latin sentences of any length occur, and continue throughout the course to insure correct methods of work on the part of the student. In the translations of passages from the Latin, the use of clear and natural English is insisted upon. Reading aloud is encouraged. The work in Latin Composition aims to give the student a thorough knowledge of the fundamental principles of Latin syntax. It has been found advantageous to use a double system of note-books, calling for special written work from the student. This work deals with Latin forms, principles of Latin syntax, writing of English-Latin sentences, and finished translations of selected passages from the Latin. These courses in Latin fulfill the requirements of college entrance examinations.

Latin 1. Exercises in translations, English-Latin, Latin-English. Drill in Latin forms, drill in Latin syntax. The course aims to give the student a thorough knowledge of the fundamental principles of Latin syntax.

Latin 2. The Latin reading is not less in amount than Caesar, Gallic War, I-IV. This amount of reading is taken from Caesar (Gallic War and Civil War), Nepos (Lives), Aulus Gellius, Eutropius, Phaedrus, Quintus Curtius Rufus, and Valerius Maximus, or books of selections containing some of these with other authors of prose works. Special attention is given to sight translation, to vocabulary study, to the Latin Word List, which contains those words the student is expected to know at the end of two years of the study of Latin. There is continued drill in Latin syntax and in Latin forms. This course in second year Latin aims to meet the needs of those students who plan to enter colleges that require only two years of Latin.

Latin 3. The Latin reading is not less in amount than Cicero, the orations against Catiline, for the Manilian Law, and for Archias. This amount of reading is selected from Cicero (orations, letters, and De Senectute), Sallust (Catiline and Jugurthine War). The reading for the year includes selections from such authors as Pliny, Livy, or books of selections containing these and other authors of prose works. Special attention is given to the study of passages of Latin prose set for comprehension. The course aims to cultivate in the student the ability to render unseen passages of Latin prose into clear and natural English, as well as the ability to write simple Latin prose. Due attention is given, therefore, to vocabulary study, to the Latin Word List, which contains those words the student is expected to know at the end of three years of the study of Latin. The political and social life in Rome in the time of Cicero is studied.

Latin 4. The reading is not less in amount than Virgil, Aeneid, I-IV. This amount of reading is taken from Virgil (Bucolics, Georgics, Aeneid), Ovid (Metamorphoses, Fasti, and Tristia), or from books of selections containing poems or extracts from other poets. Special attention is given to the study of passages of Latin verse set for comprehension. The course aims to cultivate in the student the ability to render unseen passages of Latin verse into clear and natural English, as well as the ability to write simple Latin prose. Due attention is given, therefore, to Latin forms, Latin syntax, to vocabulary study, to the Latin Word List, which contains those words the student is expected to know at the end of four years of the study of Latin. Literary and historical allusions, prosody, and questions on subject matter are studied.

FRENCH

The courses in French are planned with the purpose of giving the students (1) an appreciative comprehension of French, both as literature and as a spoken language; and (2) a sufficient knowledge to fit them for advanced work. The essentials of the grammar are mastered by continued drill and constant application. The attainment of good pronunciation receives careful attention, and from the beginning the student is trained to understand spoken French.

French 1. This course begins with instruction in pronunciation and division of words into syllables. Phonetic symbols are not used. The acquisition of a basic vocabulary is stressed and the memorizing of word groups and short sentences.

The instruction in Grammar consists of the elementary forms and uses of articles, nouns, adjectives, pronouns, adverbs, regular verbs, and a few common irregular verbs. Much emphasis is placed upon written translation of English into French.

The reading text provides for the translation of at least seventy-five pages of simple French. This is largely oral translation.

The text books are "Elementary French," by Aldrich-Foster-Roule, and Roux' Elementary French Reader.

French 2. "Elementary French" by Aldrich-Foster-Roule is continued and should be completed, covering the elements of grammar and syntax, with great

emphasis upon forms and practice in their use in written composition. Frequent review lessons help to make the student familiar with the essentials.

Ford and Hicks's "A New French Reader" provides selections from the works of well-known French authors and gives a useful vocabulary of common words.

French 3. Barton and Sirich's "New French Review Grammar and Composition" is used and provides a general review and further advance in grammar and in written translation or connected prose. All the common irregular verbs and many idioms should be learned.

Buffum's "French Short Stories" provides for the reading of selections from the works of several modern prose authors.

GERMAN

At the end of the elementary course in German, the student should be able to read at sight and to translate a passage of easy German prose. He should be able to put into German, short English sentences taken from the language of everyday life, and to answer questions upon principles of German grammar. The course aims to meet the needs not only of those students who are seeking a general knowledge of German, but also of those students who are planning to take the college entrance examinations.

German 1. Chiles-Wiehr "First German Book" is used as a grammar and composition book. This is supplemented by reading Gueber Märchen und Erzählungen I, II, Immensee by Storm. Drill in pronunciation; practice in reading the German text aloud; memorizing of simple verse and prose selections.

German 2. "Chiles German Composition and Conversation" is used as a text book. This is supplemented by reading "Emil und die Detektive" by Kästner, followed by translating such works as "Germelshausen" by Gerstäcker, "Die Braune Erica," by Jensen. Exercises in comprehension; memorizing of simple German verse and prose selections. "German Frequency Word Book" by Morgan, "German Idiom Word List" by Hauch are used.

HISTORY, GOVERNMENT, ECONOMICS

The aim of the department is to give a broad knowledge of vital conditions in the growth of the leading countries of the world. This includes the study, not only of important historical facts, but more especially of the progress of development in government, society, business religion, and education. The past is studied that the present may be better understood.

History C (English). This course is a study of English History from the time of the Roman Conquest to the present. Special emphasis is given to the study of the structure of government and the legal system because of their bearing upon American development. Study of English foreign policy is essential to a better understanding of international problems of the present. Study of church problems, the Industrial Revolution, democratic growth are stressed because of present-day tolerant attitude in regard to religion, views as to wisdom of dictatorial or democratic government, and ever changing economic conditions.

History D (United States). A careful and comprehensive study is made of United States History, including not only the story of earlier times, but also an analysis of events from the Civil War down to and including our own times. Special reference is made to the social and industrial development of the country, economic progress, sources and effects of immigration, and of American government. The course is designed to cover the requirements of the College Entrance Examination Board.

History B (European). In this course a study is made of the European powers from the beginning of the seventeenth century to the present. Autocracy rampant in the seventeenth and eighteenth centuries begins to decline in the latter

eighteenth century with the French Revolution. This decline continued in the nineteenth century, giving way to democracy, which reached its peak following the World War, only to yield in many countries to dictatorships of the present day. International relations are traced, noting especially the influence of commerce and the subsequent imperial rivalries and wars. The Industrial Revolution, with its profound effect upon humanity, forms another important part of the course. Considerable stress is given to great leaders of the different European powers.

History A (Ancient). This course devotes one term to the study of the Ancient Orient and Greece as far as the death of Alexander and the break-up of his empire, with the expansion of Greek culture in the Mediterranean world. The second term is devoted to the study of the history of Rome to the year 476 A.D. The course emphasizes the characteristic elements of these civilizations. The work calls for the study of an accurate historical text book, in which not less than five hundred pages of text are devoted to the particular subject. Special attention is given to map study. The work is supplemented by a topical study of outstanding phases of the history of the period, including growth of institutions, historic characters, outstanding events and periods. The work calls for consultation of standard writers on Ancient History, especially books of Readings in Ancient History. The aim of the course is to meet the needs of those students who are seeking a general knowledge of the subject as given in a high school, to prepare students for the examinations that are given by the College Entrance Examination Board as defined in the Definition of Requirements, published by the Board.

Government. The forms of our local and state governments are taken up first. These are followed by a careful analysis of the Constitution of the United States, showing the relationship of the executive, legislative, and judicial branches of our National Government.

During the second semester a study is made of South America and the principal nations of Europe, and in addition the smaller nations where innovations may make investigation of governmental methods worth while. Because of constant comparison with United States Government, Government 1-A is a prerequisite.

Economics. The origin and development of our industrial system, and an analysis into its component parts, together with the economic phenomena accompanying them. It is intended to make economics of practical value in everyday life.

During the second semester the course embraces the reform and improvement of our industrial system; taxation, the tariff, international trade, transportation, labor and capital, public ownership, wages and profits, and other current economic problems are treated.

MATHEMATICS

The courses in mathematics are planned to meet the needs of all secondary students. They afford an opportunity for preparation in the mathematical processes which are necessary for success in industrial, commercial, or professional careers. They are intended (1) to acquaint the student with such mathematical processes and methods as he is most likely to need in the successful pursuit of other studies and in the various trades and occupations; (2) to prepare the student for the successful pursuit of the more advanced branches of mathematics in technical schools and colleges.

Algebra 1. This course introduces the student to: (1) the positive and the negative number; to its application in the four fundamental operations leading up to the solving of formulas and equations, both linear and fractional in one and two unknowns; (2) the function and the graph for both pictorial representation and the solving of equations; (3) the literal number and the study of problems.

Algebra 2. Review of Elementary Algebra with more difficult problems. Quadratics and simultaneous quadratic equations with applications, progressions, binomial theorem, logarithms, and that part of Trigonometry required by the College Entrance Examination Board in its examination in Elementary Algebra.

Geometry, Plane. The five books of Plane Geometry are studied. The numerous original exercises stimulate the power to reason clearly and to derive logical proofs. Special attention is given to those who expect to take college entrance examinations. This course meets College Entrance Board requirements.

Geometry, Solid. This course comprises the standard theorems in solid and spherical geometry. Stress is laid upon numerical exercises involving mensuration of solid figures. The work is designed primarily for those who are preparing for college. This course meets College Entrance Board requirements.

Trigonometry. This course is intended for those who wish to offer trigonometry for college entrance, or for those who intend to take up engineering.

DRAWING

Mechanical Drawing. The fundamentals of Mechanical Drawing are stressed in this course. A credit towards college entrance will be granted upon the completion of sixty-five problems or the equivalent. All work is individual and admits of progress according to the student's ability.

Instruction is given in the testing, use and care of the instruments and drawing supplies, and about thirty drawing plates are made. The topics studied in these plates include: technique practice, lettering, geometric constructions, orthographic projection, auxiliary views, revolution of objects, isometric, cavalier, cabinet and perspective projection, intersections, sections, helix and application, screw threads, dimensioning and inking.

SCIENCE

Biology. This is a comprehensive course in Biology dealing with plants and animals; their relation to their environment. The fundamental phenomena of living things are stressed. The general biological laws and theories are discussed. Whenever possible, biological principles are illustrated by the laboratory study of both plant and animal forms.

Physics. This course is intended for two groups of students. First, it will meet the requirements of those expecting to enter a college or technical school. Secondly, it is intended to help those who wish a general knowledge of the important laws and principles of Physics as applied to modern everyday experiences. The applications of Physics in such fields as household appliances, the weather, the automobile, the airplane, radio, etc., are particularly stressed with the idea of giving a background of culture and enjoyment.

Many students interested in mechanical lines will find it giving them a clearer understanding of the operations of devices of which they make constant use.

Laboratory experiments and lecture table demonstrations will illustrate the subject matter studied in the text.

Although the course is not intended to be highly theoretical, an elementary knowledge of algebra and geometry will be of assistance in the solution of problems.

Chemistry. This course has the two-fold aim of preparing the student in Chemistry for entrance to any college or technical school and providing a general introduction to the subject for other purposes.

There are class discussions of chemical principles and of chemical materials, solution of numerical problems, practice in such exercises as writing of equations, demonstration experiments carried through by the instructor. The student does assigned experiments in the laboratory and writes reports of his work.

The more important elements, both non-metallic and metallic, as well as numerous compounds, are studied. Important laws and hypotheses of Chemistry are constantly stressed.

Unless there is urgent reason for following a different order, the student is advised to arrange his succession of courses in such a way that Chemistry will be preceded by a study of Physics.

WHAT THE LINCOLN PREPARATORY SCHOOL OFFERS

Evening high school courses are conducted on day-school standards by a competent faculty in a School accredited by the New England College Entrance Certificate Board.

TYPES OF COURSES AVAILABLE

FOR COLLEGE

- (a) Courses preparing students for the entrance examinations of all colleges and for the examinations of the College Entrance Examination Board.
- (b) Courses preparing students for recommendation for entrance by certificate (without examination) to those colleges that admit by the certification method.
- (c) Courses preparing students to enter those colleges that require high school graduation as an entrance requirement.

FOR HOSPITALS

- (a) A high school course which prepares students to enter upon a training program in accredited hospitals.
- (b) Courses which prepare graduate nurses who are not high school graduates to fit themselves for graduate study, and for teaching and administrative positions in hospitals.

FOR PROFESSIONAL SCHOOLS

- (a) High school courses designed to prepare students for entrance to colleges of Engineering, Business, and the pre-legal college programs preparing for entrance into Schools of Law, both day and evening.

FOR BUSINESS

- (a) Courses that offer a sound general training for those who do not plan to enter any higher institution, whereby students develop the ability, poise, and self-confidence that make for success.

THE LINCOLN SCHOOLS

EVENING SESSIONS

LINCOLN TECHNICAL INSTITUTE

Courses leading to a diploma in the following fields:

Aeronautical Engineering	Civil Engineering
Aeronautics	Diesel Engineering
Air Conditioning Engineering	Electrical Engineering
Architectural Engineering	Mechanical Engineering
Chemistry	Structural Engineering

A six-year program conducted in conjunction with Northeastern University School of Business, leading to the degree of B.B.A. in Engineering and Business awarded by the School of Business.

Special Courses in:

Air Conditioning
Airline Operations and Dispatching
Blue Print Reading and Estimating
General Aeronautics
Methods Engineering
and many other fields

Students may register for a complete curriculum
or for individual courses

LINCOLN PREPARATORY SCHOOL

Fully accredited by the New England College Entrance Certificate Board. General, Classical, and Technical high school courses are available.

For further information regarding either of the above schools, write to

THE LINCOLN SCHOOLS

360 Huntington Avenue, Boston, Mass.

Telephone, KENMORE 5800

Huntington School

1938 - 1939

THE
HUNTINGTON
SCHOOL
for BOYS

An Urban Private Day School

*With the Advantages and Physical Facilities of a
Country Day School*

320 HUNTINGTON AVENUE
BOSTON, MASS.



FOREWORD

The Huntington School for Boys has as its primary purpose the adequate preparation of its students not only for entrance to but especially for success in the best colleges and universities. In this accomplishment the School has enjoyed a most creditable success.

The Huntington School has developed over a long period of years into a well organized and unified school, in which the outstanding factors are the excellence of the faculty, the results accomplished in preparing boys for college, the quality of the student body, and the splendid physical equipment.

This catalog sets forth in some detail what Huntington offers to boys of Greater Boston as a result of years of experience in preparing boys for college.

Within its pages we sincerely hope that our many friends, and the new friends whom we look forward to meeting and serving, will find such information as will be truly helpful in the solution of the very important problems which must be solved with boys who wish to go to college.



HUNTINGTON SCHOOL FOR BOYS

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FACULTY

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(University of Maine) (Harvard University)
Headmaster

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(Harvard University)
Head of English Department, Emeritus
President, Huntington Chapter, Cum Laude Society

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(Mass. State College) (Harvard University)
Mathematics

CARL FERDINAND CHRISTIANSON, A.B.
(Wesleyan University)
History

ROGER ARTHUR HARDY, B.S., M.B.A.
(Boston University)
Commercial Subjects

PRESTON HARVEY, A.B.
(Bowdoin College)
Latin, Ancient History

FREDERICK CHARLES HOSMER, A.B.
(Boston University) (Harvard University)
Faculty Adviser of The Huntington Record

PERCY EDWARD JONES, B.S.
(Boston University) (Sloyd Training School)
Mathematics, Mechanical Drawing

ROLAND LEO LEACH, A.B., ED.M.
(Tufts College) (Harvard University)
French and German
Director of Dramatic and French Clubs

JAMES HARRIS MORSS, A.B., ED.M.
(Boston University) (Harvard University)
English

ARTHUR EUGENE NEWCOMB, JR., A.B., ED.M.
(Middlebury College) (Boston University)
English

FACULTY (Continued)

ALFRED LORING SKINNER, A.B.
(Harvard University)
Mathematics

JOHN MOORE TROUT, JR., A.B., ED.M.
(Princeton University) (Harvard University)
French and German
Director of Chess Club

HAROLD CLAYTON WILCOX, S.B., S.M.
(Rhode Island State College) (Brown University)
Physics and Chemistry
Director of Science Club

WILLIAM GREENE WILKINSON, A.B., ED.M.
(Boston University)
(University of Kentucky) (McGill University) (Ecole Montcel)
French and Spanish

COACHING STAFF

Director of Athletics

Track

Basketball

Swimming

Baseball

Football }

Tennis

Intermediate School Athletics

WILLIAM GREENE WILKINSON

THEODORE MARTIN CHASE

THOMAS ALFRED BLAKE

RAYMOND ENGLISH MILLARD

THOMAS ALFRED BLAKE

JOHN MOORE TROUT, JR.

PERCY EDWARD JONES

EMILY RAMSAY, *Executive Secretary*

PRISCILLA SPEARE, *Secretary to the Headmaster*

MIRIAM BLAKE, *Recorder*

MYRA WHITE, *Librarian*

JOHAN GUSTAVE LARSSON, M.D., *School Physician*

CALENDAR

School Year 1938-39

School Year Begins	SEPTEMBER 21
Fall Term Examinations	DECEMBER 14-20
Close of Fall Term	DECEMBER 20
Winter Term Opens	JANUARY 3
Winter Term Examinations	MARCH 20-24
Close of Winter Term	MARCH 24
Spring Term Opens	APRIL 3
Final Examinations	MAY 31-JUNE 7
Commencement	JUNE 9
Special Program for College Board Examination Students	JUNE 12-16
College Entrance Board Examinations	JUNE 19-24
Summer Session (1938)	JULY 5-AUGUST 26
Summer Session (1939)	JULY 6-AUGUST 30

HOLIDAYS

Columbus Day, Armistice Day, Thanksgiving Day, Washington's Birthday, Patriots' Day, Memorial Day.

GENERAL INFORMATION

INTRODUCTION

THE HUNTINGTON SCHOOL was established in September, 1909.

From the outset, emphasis has been placed upon the development of those qualities and habits which it is necessary for boys to possess if they are to succeed in meeting college entrance requirements and to succeed in college after gaining admission.

The School offers both a College Preparatory and General Course. Most boys who graduate from the General Course enter Colleges of Business Administration.

With the passing of the years fathers and mothers have made it very apparent that in Greater Boston there is need for a first-class private day school such as Huntington which presents a strong college entrance program, in an environment where character qualities are emphasized, and which, at the same time, allows their boys to remain under the direct influence of the home.

Huntington boys come from all points in Boston and the surrounding cities and towns, and at times we have students who commute from as far as Worcester, Providence and New Hampshire towns and cities.

Huntington is today the only urban private day school in Boston which presents a complete development program or has the facilities for doing so.

Huntington students have every opportunity to attain a sound and well-developed body, strong character, and independence of thought, through daily association with well-rounded Christian men, in their studies, sports and general school life.

Graduates of Huntington are found in practically all of the New England colleges and in many colleges and universities located outside of this area.

The School limits its enrollment to a maximum of two hundred boys each year. There is no desire to increase this number. It is sufficiently large for the promotion of school activities which are of interest and value to growing boys. The School is not so large as to make it difficult for the

Headmaster and his associates to keep in touch with each individual.

The School enrolls boys from the eighth grade through the high school. The student body is, therefore, divided into five forms. It is our belief that the best time for a boy to start his preparatory work for college is while he is an eighth grade pupil and that the ideal period necessary for completing a college preparatory program is as we have arranged it, namely, five years. The School enrolls boys, however, in any form for which they are adequately prepared.

Although Huntington is a Day School, a few boarding students are accepted. The School accepts no responsibility for such students in respect to activities outside of school hours. The School will co-operate to the fullest extent, however, in arranging for satisfactory living quarters for those who come from a distance.

THE COMPLETE DEVELOPMENT PROGRAM AT HUNTINGTON
THE SCHOOL believes in the complete development of the individual and many opportunities are given a boy to discover and develop latent qualities.

For this reason, in addition to the regular program of studies there has been developed an extra-curricular program offering opportunities for supervised play, musical and other club activities. Competent leadership and excellent facilities are available for both the educational and extra-curricular programs.

Scholarship must, in a college preparatory school such as Huntington, occupy first place in its productive efforts but we believe that the boy who goes on to college with an appreciation of values as they should exist in a normal, active and happy life, is in a better position to succeed than one who does not have this appreciation.

LOCATION

THE SCHOOL is located in the Boston Y. M. C. A. building at 320 Huntington Avenue (nearly opposite the Boston Opera House) in the educational and cultural center of Boston. It is within easy reach of all points in Greater Boston. The running time by surface cars from Back Bay.

Station is five minutes, and the cars from both the North and South Stations (by way of Park Street) reach the School in twenty-five minutes. The School is within easy walking distance of the Huntington Avenue, Trinity Place and Back Bay railroad stations. For those who use surface cars only, the School is fifteen minutes from Park Street in the Subway and a few minutes from Massachusetts Station in the Boylston Street Tunnel. The School is accessible by trolley and automobile from all suburban sections. There are parking facilities.

BUILDINGS

THE SCHOOL is housed in a building especially equipped for educational work and for successfully carrying on the complete program which it sponsors.

RECITATION BUILDING The recitation rooms, the physics and chemistry laboratories, and the drawing rooms are on the second, third, and fourth floors.

NATATORIUM The swimming pool, seventy-five feet long by twenty-five feet wide, is supplied with filtered water heated to a proper temperature by an elaborate system of pipes. It is one of the finest in New England. The School has special hours reserved in the pool for its general swimming work.

GYMNASIUM In the rear of the main building, and closely connected with it, is the Samuel Johnson Memorial Gymnasium, the largest indoor gymnasium in Boston. On the main floor is the gymnasium proper, equipped with the best of apparatus. The running track which encircles it fifteen feet above the floor level is twelve laps to the mile. A visitors' gallery on the same level seats 500. A special locker room, shower baths and special exercising rooms are on the floor beneath the gymnasium proper. The Huntington School has the use of the entire gymnasium area and equipment at definite scheduled periods.

EQUIPMENT

CLASSROOMS	The classrooms are of standard size and are completely equipped with modern school furniture.
LABORATORIES	The School has well equipped laboratories for physics and chemistry for conducting its science courses.
LIBRARY	The School has excellent library facilities.
DRAWING ROOM	There is a well lighted and properly equipped mechanical drawing room.

PLAYGROUNDS

THE HUNTINGTON SCHOOL has an athletic field of approximately five acres in the Longwood section of Brookline, on Kent Street, one and one-half miles from the school building. Transportation is furnished free of charge to and from the field. Here are ample and excellent facilities for all out-of-door sports. A completely equipped field house furnishes adequate facilities for both home and visiting teams. Altogether the School has one of the best athletic fields in Greater Boston. In addition to these grounds there are available at the school building tennis courts, jumping pits, and other facilities for games and sports.

MORNING ASSEMBLY

THREE TIMES each week all students assemble in Bates Hall for the purpose of taking part in a brief devotional program. At this time matters of general interest in the school life are presented to the students.

The School is non-sectarian but thoroughly Christian in the conduct of all its religious activities. Occasionally at this

time educational talks of value are presented, and special programs are given by the boys, such as rallies, concerts, short plays, and speaking programs in observance of the holidays.

LUNCH ROOM

A LARGE LUNCH ROOM is provided in the building. A satisfactory lunch may be had at a moderate cost.

INTERMEDIATE AND SENIOR GROUPS

THE STUDENT body is divided into two principal groups, indicated as intermediate and senior.

Boys in the younger group are those taking subjects customarily offered in the eighth grade and first year of high school; the senior group is composed of boys who have one, two, or three years of work to complete before entering college.

Subjects are taught with a view to the student's *progressive development* and it is desirable for him to take, if possible, the entire course offered.

SPECIAL STUDENTS

HUNTINGTON accepts each year a limited number of special students. Those taking one, two, or three subjects are so classified. Special students work for credit but not for the school diploma.

DECISION ON TYPE OF COLLEGE COURSE IMPORTANT

PARENTS AND STUDENTS should understand that admission to an A.B. degree course in college generally requires that entrance units in Latin be submitted; entrance to a B.S. degree course does not require Latin but units in this subject may be submitted.

Decision as to a college is all-important. We believe that a great deal of thought should be devoted to the question, "What College is Best for the Boy?" The Headmaster is anxious to do what he can to help in college selection and welcomes appointments with either parents or boys for the purpose of discussing this subject.

ADMISSION REQUIREMENTS

PARENTS OR GUARDIANS who wish to enter their boys in the School should fill in the Application Blank, which may be found at the back of the catalog, and return it to the Headmaster.

The School requires testimonials of good moral character of all students.

It is expected that no boy will apply for admission whose conduct in other schools has brought him discredit.

Early registration results in advantage to the student as special attention to his particular needs is made possible. A personal interview with the Headmaster of the School is required.

A registration fee of five dollars must accompany the application. This fee is in addition to the regular tuition charge and when once paid it will not be refunded.

Boys are accepted for admission to all grades from the eighth through high school.

ENTRANCE EXAMINATIONS

THE SCHOOL reserves the right to give entrance examinations if such a procedure seems advisable. These examinations may be oral or written; they may be in the form of psychological examinations or aptitude tests.

The policy of the School is a liberal one as far as entrance requirements are concerned. Most Huntington students are admitted because of satisfactory previous records, without examination.

CLASSIFICATION

IN THE UPPER FORMS a boy is classified according to the units he has earned for college entrance.

Boys are accepted for the First Form (eighth grade) on the basis of previous records and, if necessary, of entrance examination results.

GRADUATION REQUIREMENTS AND CURRICULA

STUDENTS in the Huntington School are obliged to meet certain requirements in regard to length of time in attendance, scholastic standing, and course of study, before a diploma can be awarded.

Diplomas are granted from two courses, namely, College Preparatory and General:

COLLEGE PREPARATORY DIPLOMA

FIFTEEN UNITS acceptable for college entrance are required for graduation. No student will be graduated with the College Preparatory diploma unless he can produce evidence of having received either in the Huntington School, or some other accredited school, B grades or better in at least eight units of work, or of having passed eight units of work in approved college entrance examinations. At least eight units of required work must be completed at Huntington, four of which must be of B grade or better. This applies to all students regardless of the number of years in attendance. In the remaining seven of the fifteen units required for graduation no grades less than C are acceptable. A unit is given for each subject taken five periods a week throughout the school year or the equivalent thereof, except that four years of English are counted as three units. A student must be in attendance for at least one year to receive the College Preparatory diploma.

EXPLANATORY NOTE

Parents and boys should know how it is possible to earn a Huntington School diploma in one year and the position in which a boy must be at the beginning of the year in order to accomplish this.

It is obvious that at least four years of work in one or more high or preparatory schools are necessary for securing an accredited diploma. Many boys who earn such in the Huntington School are already high school graduates. Eight units of work can be completed in a regular schedule in one year. Such a schedule might well be: English IV (3 units); Modern Language (2 units); Algebra II (2 units); and American History (1 unit).

A boy should know that while completion of such a subject as French III with a B grade entitles him to three (3) units towards graduation from the Huntington School, it by no means insures certification to college in three (3) units. This is a matter which must be decided by the Director of Admissions of the college. If there is doubt, the College Entrance Board examinations should be taken.

GENERAL COURSE DIPLOMA

FIFTEEN UNITS are required for graduation in the General Course. At least eight of these required units must be completed at Huntington. A unit is given for each subject taken five periods a week throughout the school year or the equivalent thereof, except that four years of English are counted as three units.

All subjects must be passed with a grade of C or better.

Graduates from our General Course most frequently enter Business Administration colleges and arrange their schedules on that basis.

COLLEGE ENTRANCE UNITS

FIFTEEN UNITS are required by most colleges for entrance. Each year the Huntington School sends to college several students who do not graduate but who come to us for the purpose of earning sufficient units, in addition to those previously earned elsewhere, so that they can be accepted by the college of their choice.

Since promotion at Huntington is entirely by subjects, the School is in an excellent position to serve those who do not need a full program of study or who do not necessarily need to meet our graduation requirements in order to enter college.

COLLEGE PREPARATORY COURSE

<i>Required:</i>	<i>Units</i>
College Preparatory English (4 years)	3
Algebra	2
Plane Geometry	1
French, German, or Spanish	2
Physics or Chemistry	1
American, Ancient, or European History	1
	<hr/>
	10

<i>Electives:</i>	<i>Units</i>
Latin	2, 3 or 4
French, German, or Spanish	2 or 3
Physics or Chemistry	1
American, Ancient, or European History	1
Solid Geometry	$\frac{1}{2}$
Trigonometry	$\frac{1}{2}$
Mechanical Drawing	1 or $\frac{1}{2}$

In addition, other electives may be permitted by special consent provided they are accepted by the college to which the student seeks entrance.

Language and Mathematics requirements vary somewhat for entrance to the different colleges. This is especially true of the Latin and Modern Language requirements. Some colleges require three entrance units in either French or German. Some technical colleges require Solid Geometry or Trigonometry or both for entrance. It is the student's responsibility to meet the requirements of the college he elects to enter.

Some colleges accept a limited number of credits in commercial subjects.

GENERAL COURSE

THE GENERAL COURSE prepares one to occupy a position in business life and also, if the right selection of subjects is made, to enter Colleges of Business Administration such as those of Boston University, Syracuse University, and Northeastern University.

A wide selection of subjects is possible, but choice of many college preparatory subjects should be made.

<i>Required:</i>	<i>Units</i>
College Preparatory English (4 years) . . .	3
American, Ancient, or European History	1
Physics, Chemistry, or Biology	1
Algebra I	1
	<hr/>
	6

Electives:

The remaining 9 units may be selected from the following:

	Units
American, Ancient, or European History	1
French, German, or Spanish.....	2
Physics or Chemistry.....	1
Plane Geometry.....	1
Bookkeeping.....	1 or 2
Mechanical Drawing.....	$\frac{1}{2}$ or 1
General Science.....	$\frac{1}{2}$ or 1
Commercial Arithmetic.....	$\frac{1}{2}$
Commercial Law.....	$\frac{1}{2}$
Economics.....	$\frac{1}{2}$
Commerce and Industry.....	$\frac{1}{2}$
Civics.....	$\frac{1}{2}$ or 1

or from any college preparatory subjects offered by the School.

SPECIAL ONE-YEAR COURSE FOR HIGH SCHOOL GRADUATES

MANY boys need an additional year of preparation before going to college; some need to strengthen their foundation before attempting college work; some need additional units of certificate grade; and some need intensive preparation for the College Entrance Board examinations (either Plan A or Plan B). This course has been a very popular one at Huntington and much has been done for boys enrolled in it.

PREPARATION FOR COLLEGE

IN THE HUNTINGTON SCHOOL a boy can be prepared for entrance to any college. The teaching staff is experienced in this field and all courses are arranged with college entrance always in view.

There are three principal methods by which a boy may meet the college entrance requirements. These are: (1) By certificate; (2) By examination; and (3) By a combination of certificate and examination.

Such colleges as Harvard, Yale, Princeton, and the Massachusetts Institute of Technology as a rule require that either the College Entrance Board examinations shall be passed or the examinations set by the colleges themselves. In the case of Harvard, the College Board examinations must be passed.

Any boy interested in entering any one of the above colleges should consult the various college catalogs for detailed information or consult the Headmaster.

Certification for entrance to colleges belonging to the New England College Certificate Board requires that B grades shall be earned. Huntington has special certification arrangements with many colleges that do not belong to the Board.

SPECIAL COURSES

IN HUNTINGTON there are especially arranged courses for preparing boys for entrance to certain colleges.

For example, there is a two-year course in which a boy may be prepared to meet the requirements for entrance to the *Massachusetts Institute of Technology* provided certain previous requirements have been met. There is a special folder descriptive of this course which will be sent upon request.

In Huntington a boy will find especially arranged courses for entrance to the Boston University College of Business Administration, the University of Maine, Northeastern University, Worcester Polytechnic Institute and many other colleges.

An educational offering at Huntington that has helped many earn needed credits is the Summer School. Here, full units may be secured for work done. This session is co-educational. Much time has been saved by a program including one or more regular school years and summer sessions. The Headmaster will gladly discuss such a program with those who have an interest in it.

TEACHER QUALIFICATIONS

PREPARATION FOR COLLEGE requires teachers who are not only especially trained but especially adapted for such work. In Huntington no teachers are engaged with less than five years of experience in the college preparatory field and certainly none on the staff are without understanding of the problems that most boys must face and solve if the college entrance situation is to be satisfactorily met. All teachers in Huntington are men who have been selected because of a demonstrated ability to work with boys.

PARENT-TEACHER CO-OPERATION

PREPARATION FOR COLLEGE when best accomplished requires co-operation from all persons involved, namely, the boy, his parents, his teachers, and the college Directors of Admission. At various periods throughout the year, Parent-Teachers Meetings are held. These meetings afford opportunity for the discussion of mutual problems. The Headmaster is always available for interviews with parents.

HUNTINGTON A RECOGNIZED SCHOOL

THE SCHOOL is recognized by the leading colleges. The School is a member of the New England Association of Colleges and Secondary Schools and the Private School Association.

The School has full certification privileges as granted by the New England College Entrance Certificate Board. The School has a Cum Laude Charter.

SCHOOL POLICIES

HOURS OF ATTENDANCE

THE SCHOOL is in session five days each week. Attendance on Saturday mornings may be required of students who need supplementary instruction, who are behind in their work, or who are called back for disciplinary reasons.

The daily hours of attendance for boys in the Senior School are from 9.00 A.M. until 2.20 P.M. Recreational and extra-curricular activities are held after 2.20. Boys in the Intermediate School remain until 3.45 except on Fridays, when they are dismissed at 2.20.

The Intermediate School Schedule is as follows:

9.00 — 9.15	Assembly
9.15 — 12.15	Recitations
12.15 — 12.45	Lunch
12.45 — 1.30	Recitation
1.30 — 3.00	{ Physical Training, Games, etc., at Huntington Field every day except Friday during fall and spring terms. During winter term this period is used for Play Activities in the Johnson Memorial Gymnasium and the Swim- ming Pool, and for Club Activities, etc.
3.00 — 3.45	Study Period

EXAMINATIONS

EXAMINATIONS are held at the close of each term. Boys who fail in examinations must make up the deficiency within a reasonable time or enter a lower Form in the subjects in which they have failed. Unexcused absence from an examination means failure in the course.

MARKING SYSTEM

THE FOLLOWING is the marking system used by the School:

A	90% to 100%
B	80% to 90%
C	70% to 80%
D	60% to 70% (unsatisfactory)
F	Failure
Inc.	Incomplete

A is a mark of high distinction and is given to a student whose work approaches perfection, or it may be considered as a grade representing approximately the best that may be expected of a student.

B is given for work plainly above the average. Students who are to succeed in the best colleges should be able to attain this grade consistently.

C is given for average work. The standards of the School are such that students obtaining some C grades with a majority of B grades or better may expect to succeed in many colleges and will be recommended for entrance to many institutions not requiring B grades for certification.

D is given for work that lies between passing and absolute failure. It is often given to inform the student that by increased effort, he may place himself in the C group and then be in a position for even greater rewards. D does not count for diploma credit.

F indicates failure and requires repeating the subject.

Inc., meaning Incomplete, is given for work which may be ranked later as a result of make-up work or examinations.

TESTS

THE SCHOOL recognizes the need of having its students become accustomed to frequent testing. Entrance to college often requires ability to pass difficult examinations and successful progress in college is quite likely to depend upon one's ability to meet test situations satisfactorily. The School believes that a student can overcome the fear and nervousness incidental to taking examinations by being frequently tested. Short examinations are given often in all classes.

REPORTS

REPORTS of the boys' work are sent home frequently. Work missed for any logical reason is marked "incomplete" until made up, when the grade obtained in making up the work is substituted. Absence from an examination without a satisfactory excuse means a failing grade (F) in the course.

PROMOTION BY SUBJECTS

PROMOTION BY SUBJECTS rather than by classes is the ideal way to build up a good foundation for success in college. Why, for example, should a boy proceed with French II until he has mastered to a reasonably successful degree, French I?

Promotion by subjects requires a flexible schedule and a larger teaching staff than would be necessary in the usual situation. The Huntington School, realizing its responsibilities as they concern the preparation of boys for entrance to and especially for success in college, offers a schedule which can generally meet any need of those desiring college entrance units.

Graduation from the Huntington School and entrance to the great majority of the colleges requires evidence that fifteen units have been satisfactorily completed. This is a reasonable requirement. No student could expect to succeed in college unless he is capable of meeting it.

REGULATIONS

THE CO-OPERATION of all parents in the enforcement of regulations is requested. Each boy is expected to be punctual in his attendance at every school exercise. Dismissing a student before the close of the school day interferes seriously with the school routine and with the student's advancement. Only in case of unusual urgency should such requests be made. Outside appointments should be made at a time when they do not interfere with the school work.

When a boy is entered in the School it is understood that his attendance is controlled by the School. Absence from school except for sickness will result in inconvenience to the student.

The School does not seek to enroll students who require severe restrictions. The right is reserved by the School to dismiss any boy whose conduct, influence, industry, or progress is unsatisfactory in the judgment of the Headmaster.

DETENTION

THE SCHOOL reserves the right to detain students after the regular hours, or on Saturday, to make up back work, or for disciplinary reasons.

HONORS AND AWARDS

SCHOLARSHIP HONORS

THREE GRADES of honors for scholarship are conferred at the end of each grading period: "Highest Honors" upon all boys who have maintained a rank of A in all courses; "Honors" upon all boys who have not received a rank lower than B in all courses; "Honorable Mention" upon all boys who have received an average of B in all courses.

SCHOLARSHIP AWARDS

SCHOLARSHIP MEDALS are awarded at Commencement to the student in each Form in the School who maintains the highest rank during the year.

THE ALBERT WALTER SWENSON MEMORIAL MEDAL

ESTABLISHED in 1929 by Mrs. Swenson in memory of her husband. Mr. Swenson for nine years served the School faithfully as Head of the Modern Language Department and for two and a half years as Associate Headmaster. Awarded for excellence in French III to that student who has attended the School for at least one year.

THE CLASS OF 1928 MEDAL

ESTABLISHED in 1928 by the graduating class of that year. Awarded at Commencement to the member of the Senior Class who excels in English.

THE RICHARD JOHN CARROLL MEMORIAL MEDAL

ESTABLISHED in 1928 by the parents of Richard John Carroll, a graduate of the School in 1927 and president of his class. Awarded at Commencement to the student in the Junior Class who excels in English Composition.

THE ARTHUR STANTON CARLETON MEMORIAL MEDAL

ESTABLISHED by the parents of Arthur Stanton Carleton in 1930, the year in which Arthur would have graduated from the Huntington School had he lived. Awarded each year to the member of the Junior School whose play, spirit, and character have best maintained the traditions of the School.

THE ALBERT WALTER SWENSON PUBLIC SPEAKING MEDAL

ESTABLISHED in 1929 by friends of Mr. Swenson from the student body and alumni of the School. Awarded to the winner of the Public Speaking Contest.

CUM LAUDE SOCIETY

THE HUNTINGTON CHAPTER of the Cum Laude Society was established in 1928. This is a national honorary society which in preparatory schools corresponds to the Phi Beta Kappa Society in colleges. Each chapter may elect to membership teachers of the school who are members of the Phi Beta Kappa Society, or any similar honorary society approved by the Board of Regents.

Each chapter may elect as members those students of the highest class in any academic course who have had an honor record up to the time of election and stand in the first fifth

of the class, choosing the whole number at the end of the school year, or not more than a tenth of the class at any time during the year and the remainder at the end.

EXTRA-CURRICULAR ACTIVITIES

THE SCHOOL sponsors several extra-curricular activities. These vary somewhat from year to year, depending upon the desires of the student body. Generally, we have a Public Speaking Group, a Literary Club, a Chess Club, a Current Events Club, a French Club, and a Science Club. One of the principal social events of the year is the Father and Son Banquet, at which certain groups of students provide the entertainment. In anticipation of this event, a Glee Club and Orchestra are organized. The School publishes a paper called *The Huntington Record*, and a considerable number of boys are on the staff of this publication.

PHYSICAL EDUCATION

PHYSICAL EDUCATION may be defined as the process of developing the body in the right way. The policy of physical training in the Huntington School is a broad one. We are not concerned exclusively with bodily development but rather with general development. Accordingly we believe that the by-products of games and sports are of great importance. To secure the greatest benefits from a program of physical training the various squads must be under the direction of men who because of what they are and because of their leadership provide valuable character training.

All students, unless excused as a result of a certificate from the family physician are urged to participate in some form of physical activity during the winter term. A gymnasium class meeting regularly each week is available for those not wishing to enter a definite sport.

A study which we have made seems to indicate that boys who refuse to become interested in any form of physical exercise seldom become successful students.

Play is just as much an essential part of any school program as study provided it is properly supervised. A well-balanced program of physical education invariably does much to increase efficiency in the classroom.

SPORTS

MANY DIFFERENT SPORTS are offered each season, such as, during the fall term, football, track, tennis; during the winter term, track, basketball, skiing and swimming; and during the spring term, baseball, track, and tennis. Each sport is directed by a coach who is experienced in directing athletics.

GYMNASIUM UNIFORMS

IT HAS BEEN FOUND advisable to have a uniform suit for gymnasium classes. New pupils, therefore, are requested not to get gymnasium suits before entering. Orders are taken in the Physical Department shortly after the opening of the School in the fall.

MAROON AND BLACK MEET

AT THE CLOSE of the fall term the student body is divided into two groups, the Maroons and Blacks (the School colors). A very interesting track and swimming meet is held in which both Intermediate and Senior groups are represented.

SOCIAL EVENTS

THE SCHOOL sponsors and supervises a well defined program of social events, namely, the Huntington School Promenade, the Father and Son Banquet, and the Commencement Dance.

OUTLINE OF COURSES

TEXTBOOKS AND COURSE CONTENT

ALL TEXTBOOKS are carefully selected; they are standard and meet the college entrance requirements. The various course contents meet in full the requirements as set by the leading colleges and universities and as outlined by the College Entrance Examination Board.

The School has a system of review previous to the College Board examinations which has proved most effective in preparing boys for these important tests.

INTERMEDIATE SCHOOL

STUDENTS will select, each year, with the advice of the Headmaster, twenty hours of work. Only the student of exceptional ability will be permitted to take more than a normal schedule of hours.

FORM I (EIGHTH GRADE)

- | | |
|-------------|--|
| ENGLISH | Fundamentals of Grammar. Oral and written composition correlated with the other school work and based upon school experiences of the pupil. Special emphasis upon the development of the sentence sense. Directed reading from a wide range of modern as well as classical writers. Preliminary diagnostic tests with individual work based upon the results of the tests. |
| MATHEMATICS | A comprehensive review of Arithmetic. Emphasis upon rapid and accurate computation and analysis of problems and formulae and their applications. A thorough preparation for more advanced Mathematics. |

SOCIAL STUDIES The social studies are so correlated as to contribute towards the understanding and the intelligent solution of contemporary social and industrial problems. Their limits as well defined fields of knowledge are recognized, but through the problem and the topic method subject matter boundaries are frequently ignored. The content material of the essentials of Geography and Elementary General History are covered as a correlated program of social studies.

HISTORY

GEOGRAPHY

CIVICS

SCIENCE The chief topics are "The use of machines and electricity in every day life," "The earth and its relation to the other astronomical bodies," "The earth's crust," and "Life on the earth." A considerable amount of time is spent in the laboratory working out simple experiments.

MECHANICAL DRAWING The elementary course in Mechanical Drawing includes attention to geometrical construction, lettering and the drawing of simple objects.

FORM II (FOURTH YEAR FROM COLLEGE)

ENGLISH Drill in grammar, punctuation, and spelling. Study of the sentence. Study of elementary composition. Special attention to the development of good taste in reading. Class study of *Ivanhoe*, selected lyric poems and short stories. Individual reading of at least four books selected from the College Board List.

MATHEMATICS	The fundamental operations are thoroughly covered and in addition, stress is laid on a sound preparation for the college preparatory courses in Algebra.
LATIN	In the Latin I course an effort is made to master such vocabulary, inflections and syntax as seems necessary as a foundation for college preparatory work in the subject. Much time is devoted to reading and writing simple prose and in establishing the proper relation between Latin and English words. Boys who have a competent knowledge of English grammar attain the best success in this Latin course.
SPANISH	A beginner's course which, although designed primarily for the student who will continue through a second year, will give a practical foundation of grammar enabling one to continue the language for his own pleasure. Pronunciation, dictation, reading of simple prose, oral practice.
ANCIENT HISTORY	Brief view of the Eastern nations, with emphasis on their civilization. History of Greece to the disintegration of Alexander's empire, with special attention to political, intellectual and artistic development. History of Rome to death of Charlemagne, emphasizing political growth, development of the Roman legal system, and the growth of the Christian church. Ample opportunity is given for development of individual interests within the course through use of reference texts provided by the School. The course carries college entrance credit.
MECHANICAL DRAWING	Covers: use of instruments, geometric constructions, orthographic projection, isometric projection, working drawings of simple objects, developments and intersections.

SENIOR SCHOOL

FORM III (THIRD YEAR FROM COLLEGE)

ENGLISH	Continuation of the work of Form II in grammar, punctuation, and spelling. Study of the paragraph. Composition and memory work. Class study of Silas Marner, Idylls of the King, Sohrab and Rustum, Prisoner of Chillon. An introductory study of the essay. Individual reading of at least four books from the College Board List.
MATHEMATICS	The five books of Plane Geometry according to accepted standards. Emphasis on original proofs and practical applications. The course covers the College Board requirements.
LATIN	Careful translation of four books of Caesar's Gallic War or an equal amount from approved authors, sight reading from Caesar, Nepos, Tacitus, or Pliny. Systematic study of grammar and Latin composition. Prepares for Cp. 2 (Two-Year) Latin College Board examination.
FRENCH	Study of the elementary principles of grammar. Practice in pronunciation and in easy conversation. Short written themes and reading of French stories ranging from the simple to those of moderate difficulty. Introduction to the study of irregular verbs and common idioms.
SPANISH	A thorough review of first year Spanish with more advanced work in grammar and composition. Much and varied reading places emphasis on comprehension. This course prepares for the Elementary Spanish examination of the College Board.

ANCIENT
HISTORY

Brief view of the Eastern Nations, with emphasis on their civilization. History of Greece to the disintegration of Alexander's empire, with special attention to political, intellectual and artistic development. History of Rome to death of Charlemagne, emphasizing political growth, development of the Roman legal system, and the growth of the Christian church. Ample opportunity is given for development of individual interests within the course through use of reference texts provided by the School. The course carries college entrance credit.

FORM IV (SECOND YEAR FROM COLLEGE)

ENGLISH

Continued study of rhetoric and composition. Précis Writing. Individual reading of at least six books from the College Board List. Class study of Modern Essays, Selected Poems, and House of Seven Gables. Thorough review of English grammar.

MATHEMATICS

Review of Elementary Algebra with more difficult problems. Simultaneous quadratic equations with applications, graphical solutions, variables, progressions, the binomial theorem, logarithms and the Trigonometry requirements of the College Entrance Examination Board.

LATIN

Study of Cicero's Citizenship of Archias, Manilian Law, and the four orations against Catiline. Sight reading of selections from other works of Cicero. Study in comprehension of passages selected from other authors. Continued study of composition and grammar. Prepares for Cp. 3 (Three-Year) Latin examination.

FRENCH Continuation of the formal study of grammar and irregular verbs. Drill on vocabulary and the most frequently used idioms. Composition and translation of increasing difficulty. Conversational French. Preparation for Elementary French examination of the College Board.

GERMAN A beginner's course. Drill in pronunciation and the rudiments of grammar. Exercises to fix in mind the forms and to cultivate readiness in translation. Reading of easy German.

SPANISH Spanish courses offered in Form II and in Form III are open to students of this Form.

EUROPEAN HISTORY College preparatory course from the beginning of the 17th century to the present time. Study of leading characters. Intensive study of democratic and economic advancement, and international relations with reference to present day problems. Social and intellectual development of 19th and 20th centuries. Map study.

CHEMISTRY A standard college preparatory course in Chemistry. Lectures, recitations, laboratory experiments and problems with reference to practical applications of Chemistry in everyday science and industry. An appreciation of the "science method" is developed which helps the boy in later scientific studies.

FORM V (SENIOR CLASS)

ENGLISH Oral and written composition. A detailed study of three literary types. Practice in critical reading of specimens of modern literature and of classics acceptable for college preparation. An attempt is made toward an appreciation of excellence in literature, and in composition toward attaining some of the fundamental qualities of good style.

MATHEMATICS	<p><i>Solid Geometry.</i> The standard content of the four books of Solid Geometry.</p> <p><i>Plane Trigonometry.</i> The college entrance requirements in the subject are covered.</p> <p><i>Advanced Algebra.</i> Requirements for the Gamma College Board examination are covered.</p> <p><i>Review Mathematics.</i> This is a review course in Algebra and Plane Geometry for those contemplating taking the College Board examinations or for those seeking certification in these subjects.</p>
LATIN	Careful reading of the required amount from the works of Virgil and Ovid. Critical study of the prescribed reading. Sight reading and appreciation of style. Study in comprehension of passages selected from other authors. Continued study of grammar and historical background. Prepares for Cp. 4 (Four-Year) or Cp. H (Poets) Latin College Board examination.
FRENCH	Continued study of grammar and composition. Review of irregular verbs and common idioms. Development of an adequate vocabulary based on word frequency. Drill to attain facility in oral comprehension and expression. Readings from French classics and modern works of moderate difficulty. Comprehension exercises on selections of greater difficulty. Dictation and the writing of original abstracts and themes. Special work for College Board examinations.
SPANISH	Spanish courses offered in Forms II and III are open to students in this Form.
GERMAN	Continued drill in grammar and syntax. Exercises in writing German from texts and dictation. Reading of Modern German prose. Preparation for the Elementary German examination of the College Board. Composition work.

AMERICAN HISTORY

College preparatory course. Study of background. Special reference to development of independence and a strong national government. Intensive study of sectionalism culminating in Civil War, currency, tariff, banking, industrial growth particularly following the Civil War, democratic reform, foreign relations. Biographical study. Map work.

PHYSICS

The standard college preparatory course in Physics, dealing with the phenomena of mechanics, heat, electricity, sound, and light. Lectures, recitations and sufficient laboratory experiments to meet the college entrance requirements. Mathematical problems and discussion of practical applications. Special emphasis upon logical scientific thinking to form correct habits for college and later life.

COMMERCIAL SUBJECTS

These Courses Provide Excellent Preparation for Colleges of Business Administration.

ECONOMICS

A study of the principles outlining modern business and industrial conditions. Present day problems including transportation, taxation, and public finance. Written reports on current economic questions.

COMMERCIAL LAW

The principles of business law, including contracts, sales, negotiable instruments, agency, partnerships and corporations.

BOOKKEEPING

The elementary principles of double-entry Bookkeeping, short exercises in recording business transactions, in taking trial balances and closing the books; carefully prepared sets which illustrate modern Bookkeeping practices.

ADVANCED
BOOKKEEPING

The treatment of advanced bookkeeping principles including control accounts, columnar developed journals, adjustments, partnerships, and corporations. A good foundation course for business college freshmen accounting.

BUSINESS
ARITHMETIC

Problems in Arithmetic sufficient to meet the needs of the student in elementary Bookkeeping; especial attention paid to percentage, interest, bank discount, and commission. Rapid calculation.

COMMERCE
AND
INDUSTRY

A study of the industries and natural resources of the United States, and the other leading countries of the World. Oral and written reports on present day commercial conditions as reflected in the current magazines and daily press.

SPELLING

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FINANCIAL

REGULAR STUDENTS

The tuition for all regular students is \$425, payable as follows:

On or before the opening of School...	\$175.
November 1.....	\$100.
February 1.....	\$ 75.
April 1.....	\$ 75.
Total.....	<u>\$425.</u>

SPECIAL STUDENTS

Because of the flexible schedule in the Huntington School those who so desire may generally enroll in separate subjects. Students so enrolled, provided not more than three subjects are pursued, are classified as special students. Rates charged are on the basis of the schedule taken.

REGISTRATION FEE

A registration fee of \$5 is due from all new students when a place is reserved. When once paid, it will not be refunded. When an applicant enrolls in the School, it is understood, unless otherwise specified, that he enrolls for the entire year.

CHEMISTRY PHYSICS

A laboratory fee of \$10 is charged all students taking either Chemistry or Physics.

MECHANICAL DRAWING

A fee of \$5 is charged all students taking Mechanical Drawing.

BOOKS AND SUPPLIES

All students buy their own books and supplies. This material can be purchased from the bookstore.

GRADUATION

All students graduated from the School are charged a graduation fee of \$10, which covers the cost of diploma and expenses incidental to graduation.

All financial obligations to the School must be met before a diploma can be awarded or credit given for work completed in the School.

CHARGES FOR MEDICAL ATTENTION

The School will not assume responsibilities for injuries received or for expense incurred because of necessary medical attention for injuries received in connection with athletics.

STUDENTS' TICKETS

Students who live in suburban towns can secure railroad tickets at greatly reduced rates by applying at the office of the railroad. Students of the School are permitted to ride on the Boston Elevated on payment of one-half fare.

TUITION GRANTS

THE TRUSTEES OF THE SCHOOL set aside each year the sum of \$7,500 to be used to help boys of good character and ability who need financial assistance. This fund is administered by a Committee, the members of which carefully review all applications for aid and make the various awards.

Applicants are considered solely upon the basis of merit and need and in the order in which the applications are received. In all cases candidates for grants must interview the Headmaster of the School. Arrangements for interviews can be made through the Secretary of the School.

Those who desire tuition grants are advised to apply early as the number of applications invariably exceeds those to whom aid can be granted.

REFUNDS

THE SCHOOL assumes the obligation of carrying the student throughout the year. Instruction and accommodations are

provided on a yearly basis; therefore no refunds are granted except in cases where students are compelled to withdraw on account of personal illness.

REFERENCES

APPLICANTS for admission to the Huntington School must furnish the names of two persons, not relatives, who are able to vouch for the character and ability of the student and the financial responsibility of the parent.

The School is always pleased to refer those who inquire to parents, alumni, or educators, who are thoroughly familiar with the work of the School. Names and addresses will be furnished upon request.

Most of our students come to us through the recommendation of former students and their parents and of college deans.

HUNTINGTON SUMMER SCHOOL

EACH year, the School conducts a Summer Session beginning about the first of July and ending about the first of September.

The Huntington Summer School was established in 1912 and since that time has prepared a large number of students for entrance to the New England colleges and others outside this area.

The aim of the School is to provide tutoring and class instruction for those who are conditioned in grammar school, high school or college entrance subjects; for those who wish to complete a four-year high school course in three years; and for those who wish to make special preparation for entrance examinations to New England colleges.

The program of work includes all the courses accepted for admission by colleges, together with work usually given in the eighth grade.

The teaching force is made up of the men of the regular school faculty.

The Summer Session is co-educational.

The classes are small. The program of work is so arranged that a year's work in any course, as ordinarily counted by high schools, is completed during the Summer Session. Students who elect work which they have not before attempted usually pursue only one or two courses. Those who are reviewing are limited only to the amount of work that they can do well.

CHARGES

The rate of tuition in the Summer School is as follows:

One subject.....	\$ 50.
Two subjects.....	\$ 90.
Three subjects.....	\$120.

TUITION is not refunded because of withdrawal or change of schedule. A laboratory fee of \$10 is charged all students taking either Chemistry or Physics.

Each student pays a registration fee of \$5 in addition to the above charges. Fees are not refunded in case of withdrawal. All fees are in addition to the regular tuition charge.

The charge for individual tutoring is \$2.50 an hour.

Three-fifths of the tuition is due upon entrance, plus the registration fee. The balance, including laboratory fees, is due on August first.

A special circular of this School will be forwarded upon request.

THE ALUMNI ASSOCIATION

Every School needs an Alumni Association comprised of a membership which maintains a cooperative interest in the affairs of the School.

Many years of experimentation in alumni organization seems to have resulted in forming several definite conclusions in regard to alumni-school relationships that are sound and workable.

For example, there does seem to have been a clear demonstration that a good alumni association cannot function purely as a social organization or as an organization entirely separate from the School as far as its administration is concerned.

In schools and colleges where alumni associations have been most successful the officers of the association have invariably maintained a very close contact with the School administration and because of this have been able (as they should) to be very helpful in those respects which seem to classify themselves particularly as alumni responsibilities.

One of the responsibilities of alumni is to recommend to others the School from which graduation took place. In this respect Huntington alumni have done well.

Another responsibility is to support the association by paying dues and attending the annual meeting. Here, as in all schools, there is room for improvement. We hope for a constantly increasing membership.

Thirdly, there is need for further support of the Alumni Scholarship Fund. As Huntington graduates prosper may we hope that there will be a desire to help some worthy boy who, although ambitious to prepare for college, finds the financial burden too great to carry alone. A little help means the difference between success and failure for him. Contributions to this fund may be sent to the treasurer of the Alumni Association and addressed to the School office.

Huntington at the present time has an alumni group numbering more than twelve hundred. The ideal situation would be to have all of these enrolled as active members of the association. The cost is only one dollar a year and this includes a subscription to The Huntington Record which is published approximately fifteen times each year. Subscriptions will be accepted in the School office.

GEOGRAPHICAL DISTRIBUTION OF STUDENTS

DURING THE YEAR 1937-38, students were enrolled in the Huntington School from the towns and cities listed below:

Allston	Jamaica Plain	Reading
Arlington	Lawrence	Revere
Belmont	Lexington	Roslindale
Boston	Lewiston, Maine	Roxbury
Brighton	Lowell	Sandwich
Brookline	Lynn	Sharon
Cambridge	Lynnfield	Somerville
Chelsea	Malden	Stoughton
Chestnut Hill	Marshfield	Swampscott
Dedham	Medford	Wakefield
Dorchester	Melrose	Walpole
Framingham	Milford	Waltham
Franklin, N. H.	Milton	Watertown
Gloucester	Needham	Wellesley
Haverhill	Newton	West Roxbury
Holbrook	North Easton	Winchester
Holliston	Norwood	Winthrop
Hopkinton	Providence, R. I.	Woburn
Hyde Park	Quincy	Wollaston

COLLEGES WHICH HUNTINGTON GRADUATES HAVE ENTERED

HUNTINGTON sends approximately sixty boys to college each year. During recent years, graduates of the School have entered the following institutions of higher education:

Acadia University	Norwich University
Amherst College	Ohio State University
Babson Institute	Penn. Military College
Bates College	Penn. State College
Boston College	Rensselaer Polytechnic Institute
Boston University	Springfield College
Bowdoin College	Syracuse University
Brown University	Temple University
Cambridge University (England)	Tufts College
Clark University	U. S. Coast Guard Academy
Colby College	U. S. Military Academy
College of William and Mary	U. S. Naval Academy
Columbia University	Union College
Cornell University	University of Alabama
Dartmouth College	University of Colorado
Duke University	University of Iowa
Fordham University	University of Kansas
Franklin and Marshall College	University of Maine
Georgia School of Technology	University of Miami
Gettysburg College	University of Michigan
Harvard University	University of New Hampshire
Holy Cross College	University of Notre Dame
Lehigh University	University of Pennsylvania
Lowell Textile Institute	University of Vermont
Mass. College of Pharmacy	Virginia Military Institute
Mass. Institute of Technology	Washington and Lee University
Mass. School of Optometry	Webster College
Mass. State College	Wesleyan University
Middlebury College	Western Maryland College
N. E. Conservatory of Music	Worcester Polytechnic Institute
Northeastern University	Yale University

GENERAL SCHOLARSHIP FUND

We feel that it is the duty of every college preparatory school to make some contribution towards the education of worthy boys who have the ability to go to college and who should, as a matter of fact, have a college training. We feel that there are many among the alumni and friends of the School who are glad to help such boys by making contributions to a general scholarship fund. Such contributions should be sent to the school office and checks should be made payable to the Huntington School.

FORM OF BEQUEST

While it is not necessary, it would be appreciated if those contemplating gifts or bequests would confer with the Headmaster of the School regarding the needs of the School before legal papers are drawn.

Funds given to the school should be left in the following manner:

"I give and bequeath to the Huntington School for Boys
the sum of.....dollars."



HUNTINGTON SCHOOL FOR BOYS

APPLICATION FOR ADMISSION

Applicant's full name

(First Name)

(Middle Name)

(Last Name)

Home address

Date of birth

Place of birth

Father's name

Father's occupation

Business address

Home telephone

Business tel.

Religious preference

Condition of health

College you wish to enter

When?

Schools attended

Name and address of two persons not connected with your family, to whom we can refer.

Name

Address

Name

Address

Date

Signed

Parent or Guardian

NOTE: A registration fee of \$5.00 must accompany this application.



